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ABSTRACT

These three issues address topics relating to the education of children with deaf-blindness. The fall 1999 issue features the article, "Central Auditory Processing Disorders: An Overview of Assessment and Management Practices" (Mignon M. Schminky and Jane A. Baran), which discusses symptoms of Central Auditory Processing Disorder (CAPD), behavior manifestations of CAPD, how CAPD is assessed, educational implications of CAPD, and management strategies that can be used to remediate CAPD. The winter 1999-2000 issue features the article, "Computers in Our Classrooms" (Wendy L. Buckley), which presents an overview of computer modifications, adaptive equipment, and selected software programs used with children in the Deaf-Blind Programs at Perkins School for the Blind. The examples and ideas that are presented can be applied to a variety of other types of computer equipment and programs. The spring 2000 issue features the article "Lessons from Project PLAI [Promoting Learning through Active Interaction] in California and Utah: Implications for Early Intervention Services to Infants Who Are Deaf-Blind and Their Families" (Deborah Chen, Linda Alsop, and Lavada Minor). This article discusses the success of a project that developed resource materials that early intervention programs could use to teach families how to promote their infants' communication development. The goals, participants, training, and challenges of the PLAI project are described, along with PLAI curriculum modules and a case study. (CR)

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John Reiman, Peggy Malloy, and Randy Klumph, Eds.

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Deaf-Blind Perspectives

Volume 7, Issue 1 Fall 1999

Central Auditory Processing Disorders

An Overview of Assessment and Management Practices

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Hearing is a complex process that is often taken for granted. As sounds strike the eardrum, the sounds (acoustic signals) begin to undergo a series of transformations through which the acoustic signals are changed into neural signals. These neural signals are then passed from the ear through complicated neural networks to various parts of the brain for additional analysis, and ultimately, recognition or comprehension. For most of us, when someone talks about hearing abilities, we think primarily of the processing that occurs in the ear; that is, the ability to detect the presence of sound. Likewise, when someone is described as having a hearing loss, we assume that this individual has lost all or part of the ability to detect the presence of sound. However, the ability to detect the presence of sounds is only one part of the processing that occurs within the auditory system. There are many individuals who have no trouble detecting the presence of sound, but who have other types of auditory difficulties (e.g., difficulties understanding conversations in noisy environments, problems following complex directions, difficulty learning new vocabulary words or foreign languages) that can affect their ability to develop normal language skills, succeed academically, or communicate effectively. Often these individuals are not recognized as having hearing difficulties because they do not have trouble detecting the presence of sounds or recognizing speech in ideal listening situations. Since they appear to "hear normally," the difficulties these individuals experience are often presumed to be the result of an attention deficit, a behavior problem, a lack of motivation, or some other cause. If this occurs, the individual may receive medical and/or remedial services that do not address the underlying "auditory" problem.

What Is Meant By the Term "Central Auditory Processing?"

Katz, Stecker & Henderson(1992) described central auditory processing as "what we do with what we hear." In other words, it is the ability of the brain (i.e., the central nervous system) to process incoming auditory signals. The brain identifies sounds by analyzing their distinguishing physical characteristics—frequency, intensity, and temporal features. These are features that we perceive as pitch, loudness, and duration. Once the brain has completed its analysis of the physical characteristics of the incoming sound or message, it then constructs an "image" of the signal from these component parts for comparison with stored "images." If a match occurs, we can then understand what is being said or we can recognize sounds that have important meanings in our lives (sirens, doorbells, crying, etc.).

This explanation is an oversimplification of the complicated and multifaceted processes that occur within the brain. The complexity of this processing, however, can be appreciated if one considers the definition of central au-

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ditory processing offered by the American Speech-Language-Hearing Association (ASHA).

> Central auditory processes are the auditory system mechanisms and processes responsible for the following behavioral phenomena.
>
> - Sound localization and lateralization
> - Auditory discrimination
> - Temporal aspects of audition including
> - » temporal resolution
> - » temporal masking
> - » temporal integration
> - » temporal ordering
> - Auditory performance with competing acoustic signals
> - Auditory performance with degraded signals
>
> These mechanisms and processes apply to nonverbal as well as verbal signals and may affect many areas of function, including speech and language (ASHA, 1996, p. 41).

This definition acknowledges that many neurocognitive functions are involved in the processing of auditory information. Some are specific to the processing of acoustic signals, while others are more global in nature and not necessarily unique to processing of auditory information (e.g., attention, memory, language representation). However, these latter functions are considered components of auditory processing when they are involved in the processing of auditory information.

What Is Central Auditory Processing Disorder (CAPD)?

CAPD can be defined as a deficiency in any one or more of the behavioral phenomena listed above. There is no one cause of CAPD. In many children, it is related to maturational delays in the development of the important auditory centers within the brain. Often, these children's processing abilities develop as they mature. In other children, the deficits are related to benign differences in the way the brain develops. These usually represent more static types of problems (i.e., they are more likely to persist throughout the individual's life). In other children, the CAPD can be attributed to frank neurological problems or disease processes. These can be caused by trauma, tumors, degenerative disorders, viral infections, surgical compromise, lead poisoning, lack of oxygen, auditory deprivation, and so forth.

The prevalence of CAPD in children is estimated to be between 2 and 3% (Chermak & Musiek, 1997), with it being twice as prevalent in males. It often

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co-exists with other disabilities. These include speech and language disorders or delays, learning disabilities or dyslexia, attention deficit disorders with or without hyperactivity, and social and/or emotional problems.

What Are Some of the Behavioral Manifestations of CAPD?

Below is a listing of some of the common behavioral characteristics often noted in children with CAPD. It should be noted that many of these behavioral characteristics are not unique to CAPD. Some may also be noted in individuals with other types of deficits or disorders, such as attention deficits, hearing loss, behavioral problems, and learning difficulties or dyslexia. Therefore, one should not necessarily assume that the presence of any one or more of these behaviors indicates that the child has a CAPD. However, if any of these behaviors are noted, the child should be considered at risk for CAPD and referred for appropriate testing. Definitive diagnosis of a central auditory disorder cannot be made until specialized auditory testing is completed and other etiologies have been ruled out.

- Difficulty hearing in noisy situations
- Difficulty following long conversations
- Difficulty hearing conversations on the telephone
- Difficulty learning a foreign language or challenging vocabulary words
- Difficulty remembering spoken information (i.e., auditory memory deficits)
- Difficulty taking notes
- Difficulty maintaining focus on an activity if other sounds are present (i.e., child is easily distracted by other sounds in the environment)
- Difficulty with organizational skills
- Difficulty following multistep directions
- Difficulty in directing, sustaining, or dividing attention
- Difficulty with reading and/or spelling
- Difficulty processing nonverbal information (e.g., lack of music appreciation)

There are a number of behavioral checklists that have been developed in an effort to systematically probe for behaviors that may suggest a CAPD (Fisher, 1976; Kelly, 1995; Smoski, Brunt, & Tannahill, 1992; Willeford & Burleigh, 1985). Some of these checklists were developed for teachers, while others were designed for parents. These checklists can be helpful in determining whether a child should be referred to an audiologist for a central auditory processing assessment.

How Is CAPD Assessed?

CAPD is assessed through the use of special tests designed to assess the various auditory functions of the brain. However, before this type of testing begins, it is important that each person being tested receive a routine hearing test for reasons that will become obvious later.

There are numerous auditory tests that the audiologist can use to assess central auditory function. These fall into two major categories: behavioral tests and electrophysiologic tests. The behavioral tests are often broken down into four subcategories, including monaural low-redundancy speech tests, dichotic speech tests, temporal patterning tests, and binaural interaction tests. It should be noted that children being assessed for CAPD will not necessarily be given a test from each of these categories. Rather the audiologist will select a battery of tests for each child. The selection of tests will depend upon a number of factors, including the age of the child, the specific auditory difficulties the child displays, the child's native language and cognitive status, and so forth. For the most part, children under the age of 7 years are not candidates for this type of diagnostic testing. In addition, central auditory processing assessments may not be appropriate for children with significant developmental delays (i.e., cognitive deficits).

Space limitations preclude an exhaustive discussion of each of the central tests that are available for clinical use. However, a brief overview of the major test categories is provided, along with an abbreviated description of a few tests that are considered representative of the many tests available for use in central auditory assessments.

Electrophysiologic tests

Electrophysiologic tests are measures of the brain's response to sounds. For these tests, electrodes are placed on the earlobes and head of the child for the purpose of measuring electrical potentials that arise from the central nervous system in response to an auditory stimulus. An auditory stimulus, often a clicking sound, is delivered to the child's ear and the electrical responses are recorded. Some electrophysiologic tests are used to evaluate processing lower in the brain (auditory brainstem response audiometry), whereas others assess functioning higher in the brain (middle latency re-

sponses, late auditory evoked responses, auditory cognitive or P300 responses). The results obtained on these tests are compared to age-appropriate norms to determine if any abnormalities exist.

Behavioral tests

Monaural Low-Redundancy Speech Tests: Due to the richness of the neural pathways in our auditory system and the redundancy of acoustic information in spoken language, a normal listener is able to recognize speech even when parts of the signal are missing. However, this ability is often compromised in the individual with CAPD. Monaural low-redundancy speech tests represent a group of tests designed to test an individual's ability to achieve auditory closure when information is missing. The speech stimuli used in these tests have been modified by changing one or more of the following characteristics of the speech signal: frequency, temporal, or intensity characteristics.

An example of a test in this category is the **Compressed Speech** test (Beasley, Schwimmer, & Rintelmann, 1972). This is a test in which the speech signals have been altered electronically by removing portions of the original speech signal. The test items are presented to each ear individually and the child is asked to repeat the words that have been presented. A percent correct score is derived for each ear and these are compared to age-appropriate norms.

Dichotic Speech Tests: In these tests different speech items are presented to both ears either simultaneously or in an overlapping manner and the child is asked to repeat everything that is heard (divided attention) or repeat whatever is heard in one specified ear (directed attention). The more similar and closely acoustically aligned the test items, the more difficult the task.

One of the more commonly used tests in this category is the **Dichotic Digits** test (Musiek, 1983). The child is asked to listen to four numbers presented to the two ears at comfortable listening levels. In each test item two numbers are presented to one ear and two numbers are presented to the other ear. For example, in figure one, 5 is presented to the right ear at the same time 1 is presented to the left ear. Then the numbers 9 and 6 are presented simultaneously to the right and left ears. The child is asked to repeat all numbers heard and a percent correct score is determined for each ear and compared to age-appropriate norms.

Figure 1. Dichotic Digits

Temporal Patterning Tests: These tests are designed to test the child's ability to process nonverbal auditory signals and to recognize the order or pattern of presentation of these stimuli. A child can be asked to simply "hum" the patterns. In this case, the processing of the stimuli would occur largely in the right half of the brain. If on the other hand, the child is asked to describe the patterns using words, then the left side of the brain is also involved, as well as the major auditory fibers that connect the auditory portions of both sides of the brain.

The **Frequency Pattern Sequences** test (Musiek & Pinheiro, 1987) is one of the temporal patterning tests used frequently with children. The test items are sequences of three tone bursts that are presented to one or both ears. In each of the sequences two tone bursts are of the same frequency, while the third tone is of a different frequency. There are just two different frequencies used in this test: one is a high-frequency sound and the other a low-frequency sound. The child therefore hears patterns, such as *high-high-low* or *low-high-low*, and is asked to either hum or describe the patterns heard. As with other central tests, the test items are presented at levels that are comfortable for the child and percent correct scores are obtained and compared to norms.

Binaural Interaction Tests: Binaural interaction tests are sometimes referred to as binaural integration tests. These tests tap the ability of structures low in the brain (brainstem) to take incomplete information presented to the two ears and fuse or integrate this information in some manner. Most of the tests in this category present different parts of a speech signal to each ear separately. If only one part of the signal is presented, the child usually cannot recognize the test item. However, if the two different parts of the stimuli are presented simultaneously, with one portion going to one ear and the other portion to the other ear, the child with normal processing abilities has no difficulty recognizing the test item. This is because the two parts (which are unrecognizable if

presented in isolation) are integrated into a single identifiable stimulus by the auditory nervous system.

An example of a test in this category is the **Rapidly Alternating Speech Perception** test (Willeford, 1976). For this test, sentence materials are divided into brief segments which are alternated rapidly between the two ears. The example below is a rough approximation of what happens to a sentence when it is segmented in this manner. In this example, the first sound in the sentence (represented by *pu*) is presented to the right ear, then the *t* sound is presented to the left ear, and so forth and so on. If the child hears only the segments presented to the right ear or left ear, he or she is unlikely to be able to recognize the sentence. However, if the right ear and left ear segments are presented in a cohesive fashion to the child, sentence recognition improves dramatically as long as this particular function of the brain is intact.

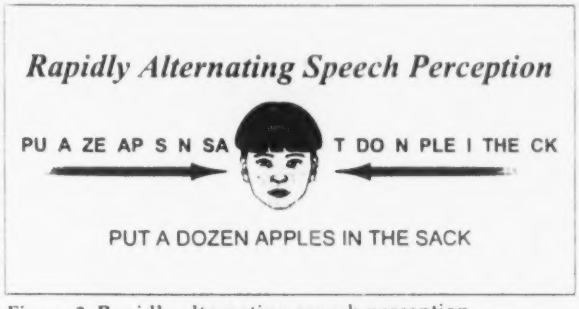

Figure 2. Rapidly alternating speech perception

What Are the Educational Implications of CAPD?

The list of behavioral observations provided earlier in this article highlights many of the academic and/or speech and language problems that might be experienced by the child with CAPD. Since speech and language skills are developed most efficiently through the auditory sensory modality, it is not unusual to observe speech and language problems, as well as academic problems (many of them language-based), in children with CAPD. If a child experiences difficulty in processing the brief and rapidly changing acoustics of spoken speech, he or she is likely to have problems recognizing the "speech sounds" of language. If problems are encountered in recognizing the sound system of language, then additional problems are likely to be encountered when the child is asked to begin to match "speech sounds" to their alphabetic representations (a skill that serves as the foundation for the development of subsequent reading and writing skills). This in turn can lead to comprehension problems and poor academic performance. It is worth reiterating at this time that not all children with CAPD will experience all of these problems. There is a wide range of variability in the problems experienced by children with CAPD; however, it should be recognized that the presence of a CAPD places the child at risk for developing many of these language and academic problems.

What Management Strategies Can Be Used To Remediate CAPD?

There are several different ways to help children overcome their CAPD. The exact procedures or approaches used will depend upon a number of factors, including the exact nature of the CAPD, the age of the child, the co-existence of other disabilities and/or problems, and the availability of resources. In general, the approaches to remediation or management fall into three main categories: (a) enhancing the individual's auditory perceptual skills, (b) enhancing the individual's language and cognitive resources, and (c) improving the quality of the auditory signal.

The following discussion presents some of the procedures that may be used with a child with CAPD. More detailed information is beyond the scope of this article, but may be found in the various resources listed at the end of this article.

Many children with CAPD will benefit from auditory training procedures and phonological awareness training. Intervention may also involve the identification of (and training in the use of) strategies that can be used to overcome specific auditory, speech and language, or academic difficulties. A number of actions can be taken to improve the quality of the signal reaching the child. Children can be provided personal assistive-listening devices that should serve to enhance the teacher's voice and reduce the competition of other noises and sounds in the classroom. Acoustic modifications can be made to the classroom (e.g., carpeting, acoustic ceiling tiles, window treatments) which should help to minimize the detrimental effects of noise on the child's ability to process speech in the educational setting. Finally, teachers and parents can assist the child in overcoming his or her auditory deficits by speaking clearly, rephrasing information, providing preferential seating, using visual aids to supplement auditory information, and so forth. The program should be tailored to the child's individual needs, and it should represent an interdisciplinary approach. Parents, teachers, educational specialists, and other professionals, as appropriate, should be

involved in the development and implementation of the child's management program.

Do Children With CAPD Have Hearing Loss?

Children with CAPD do not have hearing loss if the term is used to refer to a loss of hearing sensitivity. Most children with CAPD have normal hearing sensitivity and their auditory difficulties will not be detected during routine hearing testing unless some of the special "sensitized" tests (see discussion above) are administered. These children, however, have hearing loss in the sense that they do not process auditory information in a normal fashion. They have auditory deficits that can be every bit as debilitating as unidentified hearing loss. If the auditory deficits are not identified early and managed appropriately, many of these children will experience speech and language delays, academic failure and/or underachievement, loss of self-esteem, and social and emotional problems.

Can a Child Have Both a Hearing Loss and a CAPD?

Children can have both a hearing loss and a CAPD. Fortunately, most children seen for central auditory testing have normal hearing (i.e., detection) abilities. However, children with hearing loss can also have a CAPD. In fact, the presence of a hearing loss may place a child at risk for CAPD. This is because the auditory pathways and centers in the brain develop as they are stimulated with sound. The presence of a hearing loss may limit the amount and type of auditory stimulation that is necessary to promote optimal development of the auditory nervous system. If this happens, then auditory deficits are likely to result.

A question frequently asked of audiologists is "whether or not a child with a hearing loss can be tested for CAPD?" The answer is not a simple "yes" or "no." Many children with hearing losses can be tested as long as they have some hearing (i.e., detection) abilities. Interpretation of the test results does become somewhat more difficult for the audiologist who is conducting the testing if a hearing loss is present, but there are distinct patterns of test results that can indicate the presence of a CAPD. Moreover, there are certain tests that the audiologist can use that are not affected to the same degree as other tests by the presence of a hearing loss. These tests should be used whenever feasible. Unfortunately, there are some individuals with losses so severe that testing cannot be completed. As a general rule, central auditory testing cannot be done if the individual being tested has a hearing loss falling in the severe-to-profound range.

Where Can I Go For Additional Information?

The books listed in the reference section are good sources of information. In addition, we have provided a list of web sites that you may find helpful.

Selected Web Sites for Teachers and Parents

http://www.kidspeech.com/tips.html
http://www.ldanatl.org/factsheets/Auditory.html
http://www.healthtouch.com/level1/leaflets/aslha/aslha024.htm
http://www.ldonline.org/ld_indepth/process_deficit/table_deficits.html
http://www.ldonline.org/ld_indepth/process_deficit/pro_deficits.html/
http://www.Kidshealth.org/parent/healthy/central_auditory.html

References

American Speech-Language-Hearing Association (1996). Central auditory processing: Current status of research and implications for clinical practice. American Journal of Audiology, 5 (2), 41-54.

Beasley, D.S., Schwimmer, S., & Rintelmann, W.F. (1972). Intelligibility of time-compressed CNC monosyllables. Journal of Speech and Hearing Research, 15, 340-350.

Chermak, G.D., & Musiek, F.E. (1997). Central auditory processing disorders: New perspectives. San Diego: Singular Publishing Group.

Fisher, L. (1976). Fisher's auditory problems checklist. Bemidji, MN: Life Products.

Katz, J., Stecker, N.A., & Henderson, D. (1992). Introduction to central auditory processing. In J. Katz, N.A. Stecker & D. Henderson (Eds.), Central auditory processing: A transdisciplinary view (pp. 3-8). St. Louis: Mosby Year Book, Inc.

Masters, M.G., Stecker, N.A., & Katz, J. (1998). Central auditory processing disorders: Mostly management. Boston: Allyn & Bacon.

Kelly, D.A. (1995). Central auditory processing disorders: Strategies for use with children and adolescents. San Antonio, TX: Communication Skill Builders.

Musiek, F.E.(1983). Assessment of central auditory dysfunction: The dichotic digit test revisited. Ear and Hearing, 4, 79-83.

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Musiek F.E., & Pinheiro, M.L. (1987). Frequency patterns in cochlear, brainstem, and cerebral lesions. Audiology, 26, 79-88.

Smoski, W.J., Brunt, M.A., & Tannahill, J.C. (1992). Listening characteristics of children with central auditory processing disorders. Language, Speech and Hearing Services in Schools, 23, 145-152.

Willeford, J.A., & Burleigh, J.M. (1985). Handbook of central auditory processing disorders in children. Orlando, FL: Grune & Stratton.

Willeford, J. (1976). Differential diagnosis of central auditory dysfunction. In L. Bradford (Ed.), Audiology: An audio journal for continuing education (Vol. 2). New York: Grune & Stratton.

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Book Review

By
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Remarkable Conversations: A guide to developing meaningful communication with children and young adults who are deafblind. Barbara Miles and Marianne Riggio (Eds.) Watertown, MA: Perkins School for the Blind, 1999.

Remarkable Conversations does not read like a typical, academic textbook; it pulls the reader into (remarkable) conversations with the authors who share their wisdom, philosophies, and experience in educating learners with deafblindness. Theory is embedded in the examples and case studies, but it is not the thrust of the book. The book is refreshing and revitalizing. In fact, I easily read this book, like a good novel, for hours, without feeling the input overload that occurs when reading more technical writings. It is a practical text from the perspective of practitioners trained in deafblindness and who have taught children with deafblindness for many years. As a result, *Remarkable Conversations* provides readers with examples they can relate to and learn from.

The 14 chapters of *Remarkable Conversations* address a full spectrum of important issues relating to communication and language with learners who are deafblind, including partnering with families, conversations, environments that encourage communication, assessment, communication modes, beginning communication, teaching basic sentence patterns, complex language, adolescents with multiple disabilities, building toward adult life, and creating a vision of services. Some of these topics are ones we would expect to see addressed in such a book, but there are also some novel perspectives. Each chapter flows smoothly into the next, creating a progression from early communication to complex language with many related issues woven in between. The amount of information provided is broad but not overwhelming, due mainly to the user-friendly style.

Within the first chapter of *Remarkable Conversations*, I knew I was going to like the book. The tone immediately conveys respect for individuals with deafblindness and the unique ways they learn and understand their environments. Involvement with individuals who are deafblind is presented as an opportunity, albeit at times a challenging one. Such an opportunity affords hearing-sighted people the chance to "see" the world differently. This chapter clarified for me the importance of communication, prelinguistically (before formal language begins) and as a part of formal language. It also discusses literacy as part of language, the sociolinguistic importance of communication in relationships, as well as the responsibility of educators. To personalize the information, the authors introduce us to some individuals with deafblindness. Stories about these children and young adults, appear throughout the book to support the information. As I read about these individuals I found myself thinking about the many children I have worked with, noting the similarities and wondering if I might even know the child they were describing.

The concluding chapters of the book do an excellent job of both tying the book together and also guiding us as we build visions for quality services. In Chapter 13, the authors reinforce the idea that there is no single model of service that can meet the diverse needs of learners with deafblindness; each program needs to be individually designed, based on each child's uniqueness. The educational assessment, when conducted by qualified individuals, plays an important role in defining the foundation of the child's program and enables the educational team to develop the educational plan. This includes prioritizing areas for instruction and identifying goals, objectives and interventions, as well as considering options for least restrictive placement.

Chapter 14, the final chapter, compares the educational needs of children with deafblindness with those of other children to illustrate that there really should not be a significant difference. However, there is a difference because the general education

system is geared to meet the needs of the majority, not those with very low-incidence needs. This chapter challenges the reader to create a vision of high quality services. It lays out essential elements of a good system as well as ways to advocate for and develop such a system. Services and expertise typically will not be readily available; however, with a vision as to what might be needed, resources can be identified and developed.

Remarkable Conversations is not a theoretical textbook full of research and extensive citations. Instead, *Remarkable Conversations* is a practical guide that will inspire its readers, shift perspectives, and validate the significant role that families and educators have with children who "see and hear" the world differently.

ED Note: Remarkable Conversations may be ordered from:

Perkins School for the Blind
175 North Beacon Street
Watertown, MA 02472
Attn: Public Relations & Publications
Tel: (617) 972-7328
Fax: (617) 972-7334
The cost is $35.00 (add $5.00 if overseas).

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Supporting the Involvement of Deaf-Blind Individuals in Meetings About Deaf-Blind Topics

By Jamie McNamara
Technical Assistance Specialist, NTAC

Individuals who are deaf-blind have much to offer meetings that focus on deaf-blindness related services or projects. The unbeatable first-hand perspective of a deaf-blind person gives other participants insights into deaf-blindness that will help them carry out meeting tasks and achieve goals more effectively. Deaf-blind people benefit as well. Participation gives them an opportunity to gain respect and increased confidence from networking with others, as well as to make a contribution to improve the quality of life of other deaf-blind people.

Many different types of meetings focus on topics important to deaf-blind people. These may be one-time meetings or an ongoing series of meetings. Examples include advisory board meetings for state deaf-blind projects, state level meetings involved in developing deaf-blind services, and meetings focusing on specific topics such as planning for an Usher syndrome screening program. Another type of meeting is an IEP (Individualized Education Program) meeting for teen or young adult students in which the student may participate.

At times, I've attended meetings where there were no local deaf-blind people present to give their perspective. When I've asked meeting organizers about this lack of involvement, they've told me that either they were unable to find deaf-blind people interested in attending or that they needed more information about how to support a deaf-blind person's involvement. The suggestions below address each of these issues. They are based, in part, on my own experiences as a deaf-blind person.

Locating Interested Deaf-Blind Individuals

Contact the American Association of the Deaf-blind (AADB) — AADB publishes the Deaf-Blind Contact Directory. This directory lists services for deaf-blind people, deaf-blind organizations, and contact information for some deaf-blind people by state.

Contact state or local deaf-blind associations and agencies — Helen Keller National Center (HKNC) Regional Offices, HKNC affiliates, other agencies that serve individuals who are deaf-blind, associations of deaf-blind people, and state deaf-blind projects may be able to connect you with interested individuals. For confidentiality reasons, agencies cannot give out names and contact information unless the person gives consent, but they may be able to have interested individuals contact the meeting organizer directly. Contact DB-LINK for a list of organizations and agencies in your state.

Contact Information

American Association of the Deaf-Blind
814 Thayer Ave, Ste 302
Silver Spring, MD 20910-4500
(301) 588-6545 TTY
E-mail: aadb@erols.com

DB-LINK
Teaching Research
345 N. Monmouth Ave.
Monmouth, OR 97361
(800) 438-9376
(800) 854-7013
dblink@tr.wou.edu
http://www.tr.wou.edu/dblink

Post an announcement to an e-mail discussion group — E-mail discussion groups specific to deaf-blindness include the Deaf-Blind Mailing List and the Usher List. Both include a variety of subscribers who share information about deaf-blindness with each other. Subscribers include deaf-blind teens and adults, family members, and professionals. Send an announcement seeking deaf-blind people in your area who may wish to participate in your meeting.

Subscribing to E-mail Discussion Groups

Deaf-Blind Mailing List
Send a message to listserv@tr.wou.edu
In the body of the message type:
"Sub deafblnd" *first name last name*
(note there is no "i" in deafblnd)
or contact owner-request@tr.wou.edu.

Usher Syndrome Mailing List
Send a message to Ushers-subscribe@onelist.com
If you have difficulty subscribing contact the list-owners at Ushers-owner@onelist.com.

Publish an announcement in a newsletter — Newsletters produced by organizations that focus on issues important to deaf or blind individuals in your region may also have deaf-blind subscribers on their mailing lists.

Supporting Involvement

Once you've located interested individuals for a meeting, it is important to fully support them so they can be actively involved. The following are suggestions for providing support both before and during the meeting.

Before the meeting:

Learn about preferred methods of communication — Deaf-blind people use a variety of communication methods. The first and most important preparation necessary to support an individual's involvement in a meeting is to find out his or her preferred communication method in detail in order to make arrangements necessary to provide optimal communication during the meeting. These arrangements may include hiring interpreters, obtaining an assistive listening device such as an FM system, choosing a meeting site with good sound acoustics and minimal background noise, or making modifications to the environment that enhance visual reception. For example, for an individual who uses sign language, find out the type of sign language used (e.g., American Sign Language, Pidgin Signed English, Signed English) and whether he or she uses tactile or visual modifications. Some individuals communicate tactilely, while others have enough vision to sign visually, but require modifications such as smaller signs produced in a smaller space or closer positioning between the signers. This information will help you hire interpreters who best match the individual's style. For more information about communication systems used by deaf-blind people, see the reading list at the end of this article.

Ask about print or alternative media preferences — Deaf-blind individuals also use a variety of print and alternative media formats including Braille, standard print, large print, audiotape, or diskette. Make sure all materials associated with the meeting such as the agenda and any handouts or other materials are converted into the individual's preferred format and send this information in advance so that he or she can review it prior to the meeting. Being able to review materials in advance benefits all participants, but may be especially helpful to deaf-blind people. It is difficult, for example, for a person who uses sign language to both watch an interpreter and read materials handed out at the time of the meeting.

Find out about transportation needs — Check with the deaf-blind person to see if transportation assistance is needed to and from the meeting.

Arrange for consultant fees — Depending on the type of meeting, deaf-blind individuals should be paid as consultants when they are giving their time and expertise to be involved in a meeting. This is especially important when the individual is attending on his or her own time or doesn't have a full-time job while other participants in the meeting may have their time covered by their employer. It sends the message that his or her input and involvement is equally as important as that of professionals in the field.

Meet one-on-one prior to the meeting — It is helpful if the meeting organizer meets with the deaf-blind participant individually prior to the meeting to review the meeting's purpose and activities and answer any questions or discuss concerns the participant may have. A prior understanding of background information will make it easier for the deaf-blind person to participate effectively during the meeting. This is important if the rest of the group has met previously. It is sufficient to do this once before the start of involvement in ongoing meetings.

Come early before the first meeting — Meet again early on the day of the first meeting to provide orientation to the building (e.g., room setup, restrooms, elevator, stairs, drinking fountain) and make sure

everything is set-up to provide for good communication. Check the room for lighting and best seating. Set up the FM system or other equipment and/or meet with the interpreters. All of this takes time and can't be done adequately during the meeting.

At the meeting:

Establish communication rules and set a reasonable pace — Set communication rules for the group at the start of the meeting. It may be difficult for the deaf-blind participant to follow the flow of the conversation if people talk fast, interrupt each other, or jump in quickly to speak immediately after another person has finished speaking. To prevent this, pause between speakers and have people raise their hands when they wish to speak and say their names (and sign their names if the deaf-blind person uses sign language) before speaking. Another good technique is to go around the room one by one, giving each person a chance to speak.

Include activities that promote teamwork — Arrange activities that promote a spirit of teamwork, such as icebreakers at the beginning of the meeting or small group activities or discussions. These types of activities help all participants feel involved and included. They not only help the deaf-blind individual get to know others in the meeting, but also help other participants feel comfortable with the deaf-blind individual.

Actively encourage participation in the discussion — Check in with the deaf-blind participant from time to time by asking him or her to comment on the topic at hand. It is also helpful to have a list of the specific questions and outcomes to be discussed at the meeting sent to participants ahead of time. This helps everyone prepare in advance and is more effective than "on the spot" questions. Review the discussion during breaks and after the meeting.

Provide a means for translation of visually presented information — Establish a method to help the deaf-blind individual keep up with information that is visually presented via flip charts, chalkboard notes, and overhead transparencies. Some deaf-blind people prefer to have visual information copied for them when it is presented, while others prefer to have the information read or interpreted for them. Others may be able to read it for themselves if they have enough vision. Find out from the individual which method he or she prefers. It may also help to move visually presented information closer or to a well-lit location.

Assign tasks for future meetings — When assigning tasks to group members in preparation for further meetings or activities, be sure to ask and encourage the deaf-blind participant to take the lead or work on designated tasks.

Summary

As I mentioned in the introduction, the suggestions listed in this article are based, in part, on my own experiences. I have attended meetings where no communication rules were established at the beginning of the meeting. The frequent interruptions and rapid pace of the meetings on these occasions made it difficult for my interpreters to keep up with the flow of the discussion and made it nearly impossible for me to participate. I have also been to meetings for which I did not receive materials in advance. This prevented me from participating fully because I had to choose between reading the materials or watching the interpreter while other participants who could hear and see, were able to scan the materials while listening to the speaker. In these situations, I did not have the same access to information as everyone else. I have also experienced being asked "on the spot" questions without having been given information prior to the meeting that would have allowed me to give thought to the issues and prepare in advance. And, at times, I have had interpreters who were not skilled at meeting my interpreting needs, making it difficult for me to follow and contribute to the discussion. My own experiences and the experiences of other deaf-blind people have shown me what does and does not work to enhance the participation of deaf-blind individuals in meetings where most of the participants are hearing and sighted.

It is always a thrill to see deaf-blind people participate equally and fully alongside their hearing-sighted peers in meetings about deaf-blind related topics. Deaf-blind people CAN do it with the right support for their involvement.

For further reading:

Atwood, A. A., Clarkson, J. D. & Laba, C. R. (1994). Being in touch: Communication and other issues in the lives of people who are deaf-blind. Washington, DC: Gallaudet University.

Bagley, M., Mascia, J., & Rothstein, R.(1996). Facilitating oral communication with adults who are blind and severely profoundly hard of hearing. In Proceedings of the fifth Canadian conference on deafblindness: Living & learning: A lifelong adventure (pp.54-65). [Available from DB-LINK.]

Cooper, S. B. (1997). A glossary of some communication methods used by deaf-blind people. Views, 14 (11), 6-7.

12

Devich, J. (1997). Definitions of alternative communication styles with deaf-blind people. Views, 14 (11), 15.

Morgan, S. (1998). Sign Language with people who are deaf-blind: Suggestions for tactile and visual modifications. Deaf-Blind Perspectives, 6 (1), 3-7.

Rothstein, R. (1998). Alternative communication methods for AADB conventions. The Deaf-Blind American, 36 (2), 19-22. [Available from DB-LINK.]

Smith, T. B. (1991). Guidelines for working/playing with deaf-blind people. Monmouth, OR: Teaching Research. [Available from DB-LINK.]

Smith, T. B. (1994). Guidelines: Practical tips for working and socializing with deaf-blind people. Burtonsville, MD: Sign Media, Inc.

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With and Within Us: The DeafBlind Gift

John Lee Clark

I am John Lee Clark.
Then I am DeafBlind.

One can be Deaf and Blind with any asymmetry, but it is only through embracing oneself that one can be truly DeafBlind. My aspiration here is to share with you what all DeafBlind children and the people who live with and around them must fathom. I hope what I extend to you is a sagacity in which you can absorb the beauty of DeafBlind culture, life, and people that is here with and within us.

Let me unravel a part of my personal history that helped me learn what many DeafBlind children need to create in their lives. Then I shall probe the striking value of DeafBlind children's true selfdoms.

When I was younger, my classmates found me as their most compelling target. For that, I hated being DeafBlind. I felt worthless and I often reflected *I am a freak mutated from a human infant into what nobody likes*. Naked under the rage of my rancor, I became an unruly artist in denying who I was. Until later, I did not know that my frugal camouflages failed to shroud my DeafBlind self. I did not fool anyone, least of all myself.

Realizing that I could never sprout into my future in disguise, I—with a jolt—understood why I was a frustrating creature to my peers. My DeafBlind state was never a magnet for their creative mockery like I first believed. It was how I dyed myself that made me a vagabond on the land of peer friendship. I openly did not like the fact that I was DeafBlind and that made me odious to others. One can be amazingly exasperating when one perpetually pretends. Abruptly, I stopped blaming my being DeafBlind for all my encumbrances.

I then learned what being DeafBlind meant. By magnifying my familiarity with the arcane universe of only touching, tasting, and smelling, I became complete. I took Braille classes, oriented myself in the art of sauntering with my white cane, and plunged myself socially within the DeafBlind community. I emerged as a character who loves who and what I am.

I want all DeafBlind children to learn that hiding and masquerading is a no-no. There is nowhere one can savor life without a concrete "I am" that is one's very own.

Because of insensitive conventions in our world, innumerable children grapple with their DeafBlind lives. This results in the practice of denial. Denial, in turn, spawns the rejection of their own existence. If you work with DeafBlind children, please understand that their problems are there not because they are DeafBlind, but because of their repudiation of the DeafBlind badge. The DeafBlind label cannot be evaporated as long they breathe. Trying to peel it off squanders time and everything that time can offer.

I know some DeafBlind adolescents who try to stomach the problem of being rejected in sundry designs. Reacting to social isolation, they often view themselves as an obscure species. Believing in this (how can they not, being in their position?), they author many solutions for themselves—some rather ingenious, others highly perilous.

Some dangerous "solutions" involve flirting with death. One girl, under the notion that she could not live a DeafBlind life, attempted suicide on three separate occasions. She attended a mainstream school in her hometown. All her childhood, her family and school pedagogues were preoccupied with her eyes and her ears; every month she would be dragged through the "rounds," four eye doctors and two audiologists. Her parents and her teachers hoped to glean medical wizardry from the experts.

Her classmates, like my own, bombarded her with insults and punches. She became more and more depressed after each sneer, every visit to the white-coated doctors. It all became too much and she resolved to kill herself. However and happily, her efforts in exiting our world failed. She is now recovering from substance addiction, depression, and suicidal compulsions in a halfway house.

You have just read a sketch of countless DeafBlind adolescents' experiences. The plot is same for many, but with varying situations, scenes, and endings. The story evolves like this: People behave strangely around a DeafBlind child. DeafBlind children are, for innumerable people, a rarity and something of a freakish nature. This is shown in peer enmity and the negative mentality harbored by that child. The child then naturally hates being DeafBlind. Attempting to blast out of the mess, that child will often crash into amplified self-exile. Self-exile created from how people respond to the first stratum of that child's self-loathing grows. This could go on in circles, increasing in inclemency each time around. The realization and love for oneself can come in any time or never. Self-acceptance can be born only when one dislodges others' opinions and develops an esteemed view for oneself OR when someone helps that person learn about the power of "I am who I am, and I love who I am" by treating that person ingenuously.

In preventing any harm, parents and teachers must regard every DeafBlind child as who they are—exquisite and singular human beings—before they meet their needs as DeafBlind children. Too habitually, people who surround DeafBlind children first look upon them as DeafBlind, and then vaguely, as who they are. Hazardous inclinations such as these stifle the emotional and intellectual growth of children because the heart of a child is how that child understands the concept of "myself" through others.

An old adage construes how people interpret themselves:

I am not what I think I am.

I am not what you think I am.

I am what I think you think I am.

If a person approaches a DeafBlind child's life as a problematic case that demands intervention, the act of "curing" will be the problem. Imagine what a DeafBlind child thinks—judging from other people's behavior—on what is being thought about that child. Yes, it is devastating for that child and for anyone. I can assure you that DeafBlind children who allegedly have "certain limitations" do not have those limitations because they are DeafBlind. Rather, the culprit is—with all being equal—the limited recognition that DeafBlind children gain for being normal and simply human. Children will successfully, even exultantly, relate to their DeafBlind reality if teachers and parents respond to who they are before anything else.

I hope more and more children will be known as who they are so that they can cursively correlate themselves with the layers of identity—from oneself to one's culture. DeafBlind children, like each and every child, must not be denied the freedom of "Yes, I am!"

John Lee Clark can be reached by e-mail at johnadrean@uswest.net

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Helen Keller National Center National Registry

Nancy O'Donnell
Coordinator of the National Registry

As a professional in the field of deaf-blindness, one of the first questions I am often asked is, "How many deaf-blind people are there in the country?" For those under 22 years of age, national demographic information has been available since the mid 1980s through the efforts of Dr. Vic Baldwin at Teaching Research, Western Oregon University. For many years, though, there has been no good way to answer this question for the "over 21" population other than educated guesses. We are pleased to report, however, that during the most recent reauthorization of The Helen Keller National Center (HKNC) Act, HKNC was given the charge to maintain a national registry of those who are deaf-blind. As a result of this registry, more information will become available about the adult population.

Who Is Considered "Deaf-Blind?"

The answer to this question is somewhat sticky due to discrepancies in definitions between the education system and the rehabilitation system.

As found in the HKNC Act, the term "individual who is deaf-blind" means any individual:

(A)

(1) who has a central visual acuity of 20/200 or less in the better eye with corrective lenses, or a field defect such that the peripheral diameter of visual field subtends an angular distance no greater than 20 degrees, or a progressive visual loss having a prognosis leading to one or both these conditions;

(2) who has a chronic hearing impairment so severe that most speech cannot be understood with optimum amplification, or a progressive hearing

loss having a prognosis leading to this condition; and

(3) for whom the combination of impairments described in clauses (1) and (2) cause extreme difficulty in attaining independence in daily life activities, achieving psychosocial adjustment, or obtaining a vocation; or

(B)

who, despite the inability to be measured accurately for hearing and vision loss due to cognitive or behavioral constraints, or both, can be determined through functional and performance assessment to have severe hearing and visual disabilities that cause extreme difficulty in attaining independence in daily life activities, achieving psychosocial adjustment, or obtaining vocational objectives (United States Code, Title 29, Chapter 21, Section 1905)

Although the definition contained in the HKNC Act has been commonly accepted by the state vocational rehabilitation (VR) agencies, the VR system uses its own formal coding system (RSA 911) to identify clients by disability category. Using this system, the deaf-blind population has been consistently under-reported. For example, in fiscal year 1996, only 437 individuals were identified as deaf-blind using codes 290-298 (deaf-blindness) on the RSA 911. A look at the breakdown of some of the other categories indicates that the VR counselors need a good amount of training in the use of the codes. For example, there are an additional 207 individuals having "blindness" as a major disabling condition. Of those 207 individuals, 95 have "deafness" as a secondary condition, 4 have "hard-of-hearing" as a secondary condition and 108 have "deaf-blindness" as a secondary condition!

Establishing a Database

Over the years, HKNC has collected data on the clients we have served through our programs at headquarters, in the field, through our affiliated agencies and from other cooperating organizations. This information, however, has not been available on a national basis. This summer we have enthusiastically started the process of compiling a national database. Beginning with records stored in our archives, we are entering data on thousands of individuals, including their etiologies, severity of hearing and vision losses, methods of communication, residential situations, employment status, training needs and the like.

When this information has been entered and cleaned up, we will be able to answer such questions as the following: How many people in the registry are reported to have Usher Syndrome? Congenital Rubella Syndrome? CHARGE Association? What is the most common age of onset of vision loss reported by those with retinitis pigmentosa? What types of communication methods are most commonly used? How many people use hearing aids or FM systems? What services are available and what services are needed? All this information will be accessible in national, state, and local profiles. Cross-tabulation of data will also be possible, answering questions such as, How many females with congenital rubella syndrome are employed competitively? or How many people who are totally blind and profoundly deaf live independently?

Our demographic information will be helpful to agencies planning adult services for this population, to university programs preparing teachers to work with those who are deaf-blind, to agencies providing residential and employment services, and to the federal government as it develops initiatives and priorities for funding.

The registry will not replace the current comprehensive system of collecting census information for children aged birth to 21, collected by Teaching Research in cooperation with the State and Multi-State Deaf-Blind Projects. However, although HKNC serves those who are 18 years of age and older, we will include anyone who is deaf-blind, of any age, on our registry. If you would like to register yourself or obtain an application for someone you know, you can request a copy of the registry form from your Helen Keller Regional Representative or from HKNC headquarters at 111 Middle Neck Road, Sands Point, NY 11050, Attention: Nancy O'Donnell. All personal information will be kept in strict confidence.

Ed note: There is also a registry in Canada for deaf-blind Canadians. For more information, contact:

National Registry of Persons Who Are
Deaf-Blind in Canada
Canadian Deafblind & Rubella Association
1658 4th Avenue West
Owen Sound, ON N4K 4X4
Phone: (519) 372-0887
Fax: (519) 372-0312
E-Mail: stan.munroe@sympatico.ca

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NTAC

NTAC Updates

NTAC (The National Technical Assistance Consortium for Children and Young Adults Who Are Deaf-Blind) provides technical assistance to families and agencies serving children and young adults who are deaf-blind. Some recent activities are described below.

Idaho

If you happened to be in the state of Idaho during the first week of May you may have caught sight of a traveling training show. During this time a team of five technical assistance providers took to the skies and highways to train adult service personnel throughout the state. The team consisted of representatives from the Idaho Commission for the Blind, the Idaho Division of Vocational Rehabilitation, the Idaho Project for Children and Youth with Deaf-Blindness; the Helen Keller National Center; and NTAC. The training, attended by 79 participants, heightened awareness and interest in deaf-blindness through lecture, simulations, and group activities. In addition to many positive comments about the agenda and materials, the workshop evaluations showed a great appreciation for the excellent work of two of the presenters: Dana Ard, who is blind, and Dorothy Walt, who is deaf-blind. There was a general consensus that the inclusion of presenters with sensory disabilities greatly impacted the participants. A more in-depth training will be provided in the coming year to participants who are interested in further advancing their knowledge and skills.

Connecticut

The Board of Education & Services for the Blind (BESB), the New England Center for Deaf-Blind Services and NTAC have embarked on an exciting journey. Over the past couple of months service providers throughout Connecticut gathered to gain knowledge in the areas of deaf-blindness, communication modes, assistive technology, supported employment, transition, and more. In all, there were approximately 115 participants in attendance. The collaborative relationship between service providers throughout Connecticut continues to expand. Members of the state Deaf-Blind Committee hope to strengthen this relationship by holding a one-day retreat in September 1999. During this time the group will revisit its mission statement, develop a value statement and identify task specific working sub-committees.

Virginia

The Virginia Department of the Visually Impaired in collaboration with the Division of Rehabilitation Services and NTAC, sponsored its second annual "Transition Week" June 20-25. A group of young adults who are deaf-blind spent the week in Richmond, Virginia developing skills in areas such as independent living, mobility, computers, communication, interpreting, and self-advocacy. They also had the opportunity to visit the workplace of a person who is deaf-blind to investigate some of the technology used for accessibility. To conclude the week, each participant developed a plan to outline the steps they will take to advocate for themselves during the next school year.

Great Plains States

The Great Plains Regional Alliance is a pilot grant funded by the U.S. Department of Education to work to improve the identification of Native American Children who are deaf-blind. Six states—Minnesota, North Dakota, South Dakota, Nebraska, Wyoming, and Montana—have each developed a variety identification strategies to address the unique needs of this population. Positive outcomes reported by the states include an increased number of identified children, development of public outreach materials, and more established working relationships with educators on the reservations. NTAC has supported the meetings of these alliance states almost every year for the last four years. It is hoped that the results of this project will assist other states in developing strategies to improve identification of diverse cultures.

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National Directory of Interpreters and Support Service Providers Who Work With Deaf-Blind Individuals

The National Interpreter Education Project at Northwestern Connecticut Community-Technical College has developed a directory of interpreters and support service providers throughout the United States who are interested in working with individuals who are Deaf-Blind. Directory information includes the interpreter's or SSP's level of experience, telephone number, whether their service is paid or volunteered, and area of travel. The

directory makes it possible for Deaf-Blind individuals to be personally involved in decisions about who works for them and is particularly helpful when traveling out of state. It is available in Braille, large and regular print, and disk format (Word Perfect or Microsoft Word). The project is currently accepting applications for a second edition of the directory. To request an application or a copy of the directory contact:

Phone: (860) 738-6371 V/TTY
Fax: (860) 379-3886
nw_niep@commnet.edu
Attn: Susan Sjoholm

Your support is needed to gather as many names as possible to include in the second edition. **TELL YOUR FRIENDS** and contact us today!

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Conference Announcement

1999 Annual TASH CONFERENCE
"TASH 2000: OUR TURN NOW!"
December 8 - 11, 1999
Chicago Hilton & Towers

For information contact:
The Association for Persons with Severe Handicaps
29 W. Susquehanna Avenue, Suite 210
Baltimore, MD 21204
Phone: (410) 828-8274
TTY: (410) 828-1306
FAX: (410) 828-6706
knelson@tash.org
WEBSITE: http://www.tash.org

For Your Library

The Importance of Orientation and Mobility Skills for Students Who Are Deaf-Blind (1999), by D. Jay Gense & Marilyn Gense. DB-LINK: The National Information Clearinghouse on Children Who Are Deaf-Blind. Length: 8 pages. No charge. Available from DB-LINK: (800) 438-9376 V; (800) 854-7013 TTY; dblink@tr.wou.edu. Also available on the web at http://www.tr.wou.edu/dblink/o&m.htm

Opening Doors to the Theatre: Creating Access for the Deaf-Blind Community (1999), by Judy Berk & Cathy Cogen. Deaf-Blind Theatre Access Project. Length: 10 pages. No charge. Available from Northeastern University Interpreter Education Project for New England: (617) 373-2463 V; (617) 373-4302 TTY. Also available on the web at http://www.dac.neu.edu/nuiep/tap/

A "how-to" manual intended to support theater companies and venues to better serve deaf-blind patrons.

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You are welcome to copy articles from *Deaf-Blind Perspectives*. Please provide the appropriate citations.

Cindy can give you many reasons why people who are deaf-blind, like herself, should be given a chance to work.

But not right now.

She's busy filling a customer's order.

1-800 FLOWERS is proud to employ Cindy Gagnon. She is one of hundreds of skilled deaf-blind people employed at corporations such as the Gap, Hewlett Packard, Avis, and Pizza Hut.

If you have job openings, please call the Helen Keller National Center at 1-800-255-0411 ext. 300.

Share Helen Keller's Vision

Helen Keller National Center for Deaf-Blind Youths and Adults
111 Middle Neck Road Sands Point, NY 11050

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- ❑ **Administration (*e.g.*, Dept. of Ed., project director)**
- ❑ **Service provider (*e.g.*, social worker, group home)**
- ❑ **Technical assistance provider**
- ❑ **Higher education teacher/researcher**
- ❑ **Regular education (non Spec.-Ed.)**
- ❑ **Therapist (*e.g.*, OT/PT/speech)**
- ❑ **Teacher trainer**
- ❑ **Government personnel**
- ❑ **Medical professional**
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Mail to: *Deaf-Blind Perspectives*
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or call Randy Klumph (503) 838-8885, TTY (503) 838-8821,
Fax: (503) 838-8150, E-mail: dbp@wou.edu

All issues of Deaf-Blind Perspectives *are available on the Internet at www.tr.wou.edu/tr/dbp*

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Deaf-Blind Perspectives

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Computers in Our Classrooms

Wendy L. Buckley, M.Ed.
Computer Teacher/Specialist
Perkins School for the Blind
Deafblind Program

Emphasis on technology in schools has made computers available to children in educational programs throughout the country. Books are brought to life on the screen, and children explore the world from their desktops via the World Wide Web. With modifications of hardware and software, teachers of children who are deafblind can take advantage of this exciting technology to enhance communication development, educational activities, and leisure time.

A child's physical, sensory, and cognitive abilities play important roles in determining appropriate computer activities. Although all three areas overlap, computer input and output methods are primarily determined by physical and sensory abilities; selection of educational software programs is determined by a child's cognitive abilities and educational objectives.

This article presents an overview of computer modifications, adaptive equipment, and selected software programs used with children in the Deafblind Program at Perkins School for the Blind. Many other modifications and software programs are available that are appropriate for deafblind children. The examples and ideas presented here can be applied to a variety of other types of computer equipment and programs. For additional information, see the resources listed at the end of the article.

Input Methods

Most computer systems use a keyboard and/or mouse for input to the computer. These devices present a barrier for many deafblind children because of visual or physical limitations. The following suggestions address how to work with a standard keyboard or mouse as well as alternatives to these devices.

Using a Mouse or Mouse Replacement

The use of a standard mouse requires good visual and motor skills. Children who are deafblind may be able to use a standard mouse with some modifications or they may need an alternative device.

Promoting mouse skill development. If it is physically possible for the child to use a mouse, design activities that encourage development of this skill. A drawing program, for example, may provide an enjoyable and rewarding activity that a child can use to learn control of the mouse. Popular drawing programs such as Kid Pix (Broderbund) and Kid Works Deluxe (Knowledge Adventure) add an auditory component to the drawing activity and provide a wide array of colors and drawing features.

Mouse placement. Placing the mouse on something such as a box brings it closer to the screen and makes it easier for the child to see the direct relationship between the movement of the mouse and the movement of the pointer on the screen. Placing the mouse on a slanted surface such as an empty three-ring binder helps reinforce the concept that pushing the mouse up or down moves the screen pointer up or down.

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Pointer enlargement. Enlargement of the pointer will help the child locate and follow it on the screen. The size of the pointer can be increased through the mouse control panel in Windows. For Macintosh computers, mouse control panels such as Biggy (R.J. Cooper) can be added to the system software. There are also other settings that can be used to enhance mouse visibility. For example, in Windows you can set the mouse to leave a "trail" as it moves across the screen for easier tracking and to show the location of the pointer when you hit the control key.

Tactile or visual mouse cues. A tactile "reminder" such as a small fuzzy piece of velcro on the mouse button helps the child locate the button and reminds him where to press. On a mouse with two buttons, the velcro pad or a colored dot helps the child discriminate between the two buttons.

Tracking speed. Mouse tracking speed and double-click settings can be controlled using the mouse control panel in existing system software. A very slow setting prevents the pointer from moving too quickly across the screen.

Trackballs. A trackball is a mouse alternative that looks like a mouse turned upside down. The ball is rolled within its socket to move the pointer. This requires less arm movement than moving a mouse around, making it easier for a child with limited motor abilities to use. Some trackballs such as Penny & Giles rollerball Light and Penny & Giles Trackball Plus (Don Johnston) and SAM-Trackball (R.J. Cooper), have utility programs that allow for control of cursor speed and other functions.

Joysticks. A joystick mouse allows the child to control the pointer by moving the joystick in the desired direction. A foam covering can be added for those with limited grasp abilities. SAM-Joystick (R.J. Cooper) and Penny & Giles Joystick (Don Johnston) have a tracking speed that is considerably slower than a traditional mouse and the buttons can be set to perform specific functions such as click, double-click, and lock-button-down for drag.

Touch screens. A touch screen allows a child to interact directly with the computer program by using his or her finger to point to objects on the screen as a replacement for mouse actions. Examples of touch screens include TouchWindow (Edmark), which attaches to a monitor with velcro, and Troll Touch, monitors with built-in touch screens.

Hot spots. A hot spot is an active location on the screen where the user might "point and click," resulting in action within the program. For example, in an interactive storybook, children can click on characters or objects resulting in animation, music or sounds. Once identified, the hot spot can be accessed through an alternative keyboard or with a switch. ClickIt! (IntelliTools) and Discover:Switch (Don Johnston) are examples of software programs used to create hot spots.

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Keyboard Adaptations and Alternatives

Standard computer keyboards present a challenge for many children. The letters and keys are small and contain numerous characters, and the keys are highly sensitive. For children with good motor skills and cognitive ability, learning keyboarding skills is a reasonable goal. Many children who are deafblind, however, will need a keyboard alternative.

Keyboard labels. Keyboard labels are stickers that can be placed directly on the keys. Zoom Caps (Don Johnston) are available in large print with high contrast.

Keyguards. Keyguards (Don Johnston, TASH) have corresponding holes for each key and are used to prevent unwanted key presses. They are usually made from plexiglass and attach to standard keyboards with heavy duty velcro. A keyguard also makes it possible for children with limited motor abilities to use keys such as shift and control which require two fingers, by providing a latch for each of these keys.

Slant boards. A slant board can be used to position the keyboard at a different angle or bring it closer to the screen. They are good for children with motor difficulties who use a head- or mouth-stick and may fatigue quickly if the keyboard is flat on the table. They are also useful for children with limited vision who do not have touch typing skills and may tire easily or lose their place because they constantly have to shift their focus from the screen to find letters on the keyboard. A slant board can be constructed from lightweight plywood or TriWall, a heavyweight triple layer corrugated cardboard.

Expanded or membrane keyboards. Expanded or membrane keyboards can have keys of any size printed on overlays. Each overlay may consist of letters, numbers, words, phrases, pictures or combinations thereof, customized for each child to specific software programs. Individual keys may perform multiple-step functions such as printing, saving, or moving to a different file or program. IntelliKeys (IntelliTools) comes with a standard set of overlays. Custom overlays can be created using Overlay Maker (IntelliTools). Other expanded keyboards include Discover:Board and Key Largo (Don Johnston).

On-screen keyboards. On-screen keyboards work well for children with low vision who do not have keyboarding skills because they allow the child to keep his or her head upright and focused on the screen, eliminating the need to look from the screen to the keyboard to search for letters. OnScreen (R.J. Cooper) uses standard alphanumeric keyboard characters. Discover:Screen (Don Johnston) lets the user design different keyboards containing letters, words, phrases, and pictures.

Word-prediction programs. Word-prediction programs are useful for children with limited physical abilities, poor spelling, or slow typing skills. The program attempts to guess each word as the child types the beginning of a word and presents the guesses in a numbered list. The child then selects the correct word from the list and the word prediction program transfers the word into the application. This reduces the number of keystrokes required to enter text and provides correctly spelled words. Co:Writer (Don Johnston) is one word-prediction software program.

Switches. Children with physical limitations may not have sufficient motor control to access a mouse or keyboard. If the child is able to produce a reliable motor movement, he or she may use a switch (Don Johnston, Ablenet, TASH) as a substitute. One of the most commonly used switches looks like a large button which the child presses to activate. Other switches are available with a variety of specifications to meet different fine and gross motor abilities. Software programs used to help children learn the concept of cause and effect generally require switch input for interaction with the program. Switches are also utilized in scanning, an input method for children who are unable to use direct selection. A switch interface is required to connect a switch to the computer.

Output Methods

Visual output is a major component of most computer activities for children. Many programs contain colorful graphics, animation, and QuickTime movies. Recent software programs also integrate sounds, digitized speech, and music. A child who is deafblind may have difficulty accessing these programs due to visual limitations and may not have sufficient hearing to benefit from the sound component.

Visual Output

Monitor positioning. The monitor should be positioned at eye level for the child. For some children this may mean placing the monitor on a table instead of on the CPU, or using an adjustable chair or table. Monitor arms, available at most office and computer supply centers, allow the monitor to be easily adjusted.

Monitor size. Typical monitors have a 13- or 14-inch screen, but monitors are available with screens up to 21 inches. Larger monitors increase the size of the

viewing area. This can be beneficial when using a screen-enlargement program.

Font size. The font size of labels for applications and documents can be increased using the Views control panel on Macintosh computers or Accessibility Options in Windows 95 or 98. Large fonts make it easier for children with low vision to locate their documents and programs on the desktop.

Screen-enlargement software. Screen-enlargement software performs adjustments such as screen magnification, cursor tracking, inversion of screen colors, split screen viewing, and screen review. Screen navigation is possible through the use of keyboard commands or the mouse. Examples include ZoomText Xtra (Ai Squared) and MAGic (Henter-Joyce) for Windows and inLarge (Alva Access) for the Macintosh.

Braille displays and screen readers. Braille readers can use a refreshable braille display such as PowerBraille (Blazie) on Windows computers to access the screen. A screen reader translates the information on the screen for output to a speech synthesizer for children who can understand speech. Some screen readers include support for braille displays. Window-Eyes (GW-Micro) and Jaws for Windows (Henter-Joyce) are two popular screen readers.

SoundOutput

Built-in speakers. Most computers have built-in speakers for sound output. Children who wear hearing aids may be able to hear sounds produced by the built-in speakers if the quality of the speakers is good.

Amplified speakers. Volume and vibration can be increased significantly with the use of amplified speakers. Amplified speakers are sometimes included in computer packages. They are also available from computer stores, computer mail order companies, and some electronics stores. The Interactor Cushion (AURA) is a seat cushion with a built-in amplified speaker that provides outstanding vibrational feedback of music software programs that have a heavy bass component.

FM systems. Children who use an FM Auditory Trainer can use the headphone jack in the computer and FM unit to directly receive sounds in the FM unit.

Educational Software Programs

There are hundreds of educational software programs available that address learning activities such as understanding cause and effect, choice making, language development, reading and writing, math, science, creative thinking, and communication. The selection of software programs for children who are deafblind depends upon each child's cognitive level, educational objectives, and sensory abilities.

Individual software programs can be adapted using some of the input and output methods described above to meet the learning needs of children of a variety of ages and cognitive abilities. Listed below are four different types of software programs along with examples of how each can be modified to meet different needs. Many of these ideas can be applied to other software programs to customize activities for children who are deafblind.

Art/Creativity Software

Kid Pix Studio Deluxe (Broderbund) is a multimedia drawing program. It has a wide array of tools for drawing; making lines, boxes, and circles; stamping graphics; and entering text. This program is appropriate for children as young as preschool age, yet can be fun for teenagers too. The following examples show some of the ways this program can be used.

An initial computer activity for young children. Use with a touch screen as a means of introducing very young children to the computer. The teacher makes color and other drawing selections using the mouse as the child scribbles on the screen with his or her finger to create a picture. As the child becomes familiar with the program, wonderful opportunities arise for encouraging the use of language for activities such as requesting color changes and labeling objects and pictures.

Teaching about cause and effect. One of the drawing tools available is a mixer tool that shakes up the picture on the screen. It can be used with a touch screen or switch to teach cause-and-effect activities to children of any age. Create a random drawing on the screen, select the mixer tool and place the pointer somewhere on the drawing. Each time the child touches the screen or presses the switch, the screen will change according to the mixer setting. Some settings produce a dramatic change, creating a rewarding cause-and-effect activity. There is also an eraser tool with several choices that produce dramatic screen actions.

Mouse or joystick training. Use a trackball or adapted joystick with the button locked down. Select a colorful paintbrush and place the pointer in the drawing area. As the child moves the trackball or joystick, large colorful graphics appear on the screen. Children who can use the mouse learn to "drag" or hold the mouse button down as they move it.

Teaching choice making. Drawing activities can be used as a way to help learn other skills such as with the use of a picture communication system. Give the child picture symbols associated with particular drawing tool functions (e.g., color, shape) or place them on an overlay for an expanded keyboard. The teacher then draws the picture according to the choices made by the child. Some children actually enjoy watching a picture being created more than drawing it themselves.

Interactive Story Books

A number of popular children's books have been transformed into interactive, animated stories on CD-ROM. Examples include The Cat in the Hat, Arthur's Reading Race, Little Monster at School, and Sheila Rae the Brave (Living Books/Broderbund). Although the programs are labeled appropriate for children from Kindergarten through Grade Four, meaningful activities can be created for children of other ages as well, when used with appropriate modifications.

Cause-and-effect activities. Each "page" of the book contains objects and/or characters that animate when the user mouse-clicks on them. Create hot spots for each active area on the screen. Use the scanning option with highlighting turned off to have the hot spots scanned invisibly. Each time the child presses the switch, a different hot spot is activated resulting in a random cause-and-effect activity.

Language activities.

- Using a touch screen, have the child identify and point to specific objects and characters. The child is rewarded with animation and sound each time he or she touches a requested object.
- Use a program to create hot spots and an alternative keyboard as described under Input Methods above. Make an overlay for an expanded keyboard with pictures of objects on the screen. The child can point to pictures on the keyboard to activate specific hot spots. This is an ideal activity to encourage the use of pictures and reinforce pointing to pictures. Overlays can also be created that contain line drawings, words and phrases or sentences related to objects, characters, and actions on the screen.
- Children can create their own version of a story by printing screens and using their own language to retell the story in Sign Language or in writing.
- Children who have some hearing can enjoy having a story read to them at a slower pace by using the mouse to click on each word to hear it spoken. Either the teacher or student can control the mouse for this activity.

Word Processing Programs

Word processing programs that have large print options and speech output include IntelliTalk (IntelliTools) and Write:OutLoud (Don Johnston). Each has options that allow the user to change text, background colors, font size, and voice.

- Use an expanded keyboard to create writing activities that address curriculum topics, daily schedules, lunch menu choices, spelling vocabulary, and special activities. Words, picture symbols, and photographs can be used in the overlays.
- Expanded keyboards can also be used to create keys that take the place of multistep functions. For example, some children may be able to use a word processor for basic writing activities but have difficulty with functions such as printing. An expanded keyboard with an overlay can be set up to perform these functions with a single key press.
- Use an on-screen keyboard with a word processing program for children with low vision and poor typing skills. Overlays, as described above, also work well with an on-screen keyboard such as Discover:Screen.

Cause-and-Effect Software Programs

In addition to the option of creating cause-and-effect activities using "off-the-shelf" software as described in some of the previous examples, a number of programs are available that were created specifically to encourage cause-and-effect learning using switch access.

RadSounds (R.J. Cooper). Intended for teenage users, this program has 20 choices of music, ranging from heavy rock and roll to popular songs. Colorful dancers appear on the screen accompanied by music. Amplified speakers or the Interactor Cushion (AURA), which provides feedback through vibration, allow children with limited hearing to enjoy the program.

UKanDu Switches, Too! (Don Johnston) is a series of cause-and-effect programs with large colorful graphics for young children. The programs provide the opportunity for simple sequencing to be addressed in a story format. When the switch is pressed, the story progresses one step until completion. For example, in Mary Wore Her Red Dress (Eensy & Friends), the child helps Mary dress by

pressing the switch to add dress, socks, shoes, and hat, one at a time.

Switch Basics (SoftTouch) is another single-switch program with large clear graphics. The program contains nine different activities that use sounds, music, photographs, and colorful graphics to address simple switch use, turn-taking and scanning skills.

Press to Play (Don Johnston) is a series of switch-activated programs that progress from simple cause-and-effect activities to beginning scanning skills training. The programs present a single picture cue on a black background with a large colorful graphic reward for each switch activation.

Information Resources

Closing the Gap
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RESNA (Rehabilitation Engineering and Assistive Technology Society of North America)
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Alliance for Technology Access
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Aura
Interactor Cushion Distributor
Sign-Along Communications, Inc.
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http://www.advanix.net/~ameslan/FeelSound.html
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Research-to-Practice

Parent Perspectives on Psychoeducational Assessment: Filling the Gap Between Parents and Practitioners

Harvey H. Mar, Ph.D., Project Director
Nancy Sall, Ed.D., Project Coordinator

An evaluator is preparing to conduct an assessment of a 7-year-old child who is deaf-blind. The child attends a special education program for children with severe disabilities where he receives speech/language therapy, occupational therapy, and mobility training. Materials are gathered, necessary papers collected, and the test kit is organized. Is the evaluator ready to conduct a psychoeducational assessment on this child? As we talk to more and more parents, we are learning that the answer is, "Not really."

Psychoeducational assessment is the process of carefully gathering information to learn about an individual's cognitive abilities, communication skills, social experiences, behaviors, interests, and learning style. Results from an assessment can be used to generate educational goals and to identify the best strategies and resources to help a child achieve those goals.

Because individuals who are deaf-blind are so diverse in their sensory functioning, as well as in their learning and communication skills, assessment of deaf-blind children can be a challenging task. Numerous concerns exist regarding how assessments should be conducted. The reliability of the assessment results is another important issue. Do they give an accurate picture of a particular child's abilities?

A recent project, Psychoeducational Assessment of Students who are Deaf-Blind, conducted a survey and held a focus group with parents and guardians of school-age children who are deaf-blind in an effort to determine their thoughts and concerns regarding the assessment process. Twenty-five parents responded to the survey and four participated in the focus group, sharing experiences about their own children's psychoeducational evaluations. The following suggestions were compiled from their input.

What can evaluators do to make sure assessments are useful and accurate?

Use an evaluator who has experience working with deaf-blind children. Evaluators who are accustomed to working with deaf-blind children and are sensitive to their needs have a better grasp of the concerns and issues unique to these students and their families.

Communicate directly with the student. It is important to understand how each child communicates. The evaluator needs to use the child's own communication methods (e.g., Sign Language, gestures, words, tactile signs, body language, facial expression) during the evaluation.

Become familiar with techniques for adapting test materials for children who are deaf-blind. Parents expressed frustration with evaluations that were performed using tests and procedures designed for children with normal sight and hearing. These materials are not appropriate for deaf-blind children.

Spend time becoming familiar with the child prior to formal testing. Perhaps one of the most important parts of the assessment process, from the perspective of parents, is preparing for the assessment by learning as much as possible about the student prior to the evaluation. One father stated that the very first step of an evaluation should be to get to know the child and what his or her likes and dislikes are. Another child's mother pointed out that people who don't have contact with her daughter on a regular basis don't understand what she is saying.

Be patient and take time to do the evaluation. When evaluating deaf-blind children it is essential to take enough time to give them a chance to succeed. It may be useful to conduct the evaluation over more than one session.

Include the family in the evaluation process. Ask parents for their input. Parents favored evaluations in which the practitioner took the time to contact them directly. Also take into consideration how cultural factors such as different racial backgrounds may affect the assessment process.

Include clear, easy-to-understand recommendations in the written report. The report should include suggestions for future goals and specific concrete interventions that can be used at school, at home, and in other settings. One parent commented that a helpful feature of her son's evaluation report was that it listed goals that weren't solely related to therapy, but could be used in everyday life. Avoid the use of jargon or excessively technical language. Parents may feel overwhelmed by the use of professional jargon in reports or during meetings.

Make sure that the information in the written report is accurate. Some parents indicated that while parts of their children's reports were satisfactory, other parts could be misconstrued or contained incorrect information. For example, the copy of a report one parent received stated that her son had bronchitis, but the parent had told the evaluator that her son had meningitis.

Make sure the parents receive a copy of the written report. On more than one occasion, parents indicated that they had never seen a copy of the report or they were unaware that an evaluation had been conducted.

How can psychoeducational assessments be used by parents?

Comments from parents focused on ways that psychoeducational assessments could support them at home. One parent indicated that she would like to have progress reports made available to her on a regular basis and felt that she would benefit from guidance about how to help her daughter at home. Others also felt it would be useful to receive training to help them work with their children to promote their independence and ability to communicate and interact in natural environments.

Summary

Results from this study can be used to bridge the gap between what parents and professionals know about psychoeducational assessment. The meetings and interviews conducted by this project have resulted in a greater awareness of parents' perspectives regarding the assessment process and can be used to broaden professionals' understanding of psychoeducational assessment. Based on what parents are saying, a psychoeducational evaluation must go beyond merely conducting a test or writing a report. Assessments should include parents as members of the team, and professionals should be experienced in working with individuals who are deaf-blind. Assessment also should focus on communication. It should use appropriately adapted materials and should result in meaningfully written reports that emphasize purposeful and functional interventions.

Psychoeducational Assessment of Students who are Deaf-Blind: A Decision-Making Model for School-Based Practitioners (Grant #H025D60011) is a three-year funded project from the U. S. Department of Education, Office of Special Education Programs. This article was prepared by Nancy Sall. The contents do not necessarily reflect the position of the U. S. Department of Education.

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Resources for Deaf-Blind Children and Youth

Lisa Jacobs, DB-LINK

Parents of children who are deaf-blind have much to be proud of. Their long history of advocacy for their children has succeeded in creating resources to support the goal of quality educational programs. This article describes three federally funded agencies that provide services and support to children who are deaf-blind, parents, teachers, and other service providers:

- State and Multi-State Projects for Children and Young Adults Who Are Deaf-Blind
- NTAC, The National Technical Assistance Consortium for Children and Young Adults who are Deaf-Blind
- DB-LINK, The National Information Clearinghouse on Children who are Deaf-Blind

These agencies are funded by the Office of Special Education Programs (), which is part of the Department of Education located in Washington, DC. OSEP oversees the funding of the Individuals with Disabilities Education Act (IDEA), and IDEA funding supports these three agencies. Information about NFADB, The National Family Association of Deafblind, a nonprofit, volunteer-based family association, is also listed below.

State and Multi-State Projects for Children and Young Adults Who Are Deaf-Blind

These deaf-blind projects provide assistance and training opportunities to families and to teachers, other professionals, and agencies involved with deaf-blind children (birth to age 22). The projects are responsible for identifying children who are deaf-blind in their states, and they collect statistics about the number and characteristics of deaf-blind children for a national census compiled by NTAC. In general, there is one deaf-blind project in each state, but some projects serve a group of states.

The deaf-blind projects conduct surveys in order to determine the types of assistance needed in a particular state. The educational needs of deaf-blind children and youth are unique. A deaf-blind child or people working with a deaf-blind child may need information or training in a number of areas. These include such topics as communication skill development, educational strategies, behavior management, vision and hearing loss, orientation and mobility, transition, and inclusion. Some of the services offered by states to meet these needs include workshops and other types of training events, consultations, online courses, newsletters, fact sheets, lending libraries, opportunities for parent-to-parent contact, and family retreats. Many state projects collaborate with universities and teacher preparation programs to provide information to future teachers.

If you don't know how to contact the deaf-blind project in your state, call DB-LINK. If you are aware of your state project, but have lost touch with it, call to find out what types of training opportunities or meetings are happening in your state.

The state deaf-blind projects work closely with NTAC, DB-LINK, and NFADB to enhance each project's current activities and to further develop state and local resources.

NTAC, The National Technical Assistance Consortium for Children and Young Adults who are Deaf-Blind

NTAC provides assistance and support to families, service providers, and agencies involved with deaf-blind children and youth (birth to age 28) throughout the United States. Its primary goals are to improve services and educational strategies for deaf-blind children and to help states identify all children who can benefit from those services. NTAC works primarily through state deaf-blind projects and local agencies and does not work directly with deaf-blind children. Activities include helping families and agencies in individual states and local areas form good working relationships, develop new services, and improve existing services; providing training opportunities for families and teachers; helping parents gain knowledge about services for their child and develop advocacy skills; and helping young deaf-blind adults develop the skills they need to advocate for themselves and take control of their own lives.

For a description of some of the recent activities of NTAC see "NTAC Updates" in this issue of Deaf-Blind Perspectives.

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Or,
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Voice & TTY: (516) 944-8900 Ext. 307

DB-LINK, The National Information Clearinghouse on Children who are Deaf-Blind

DB-LINK is a national project that collects and distributes information about deaf-blindness to anyone who needs it, including parents, teachers, state deaf-blind project staff, and other professionals. Services include an information center with a large collection of books, journals, newsletters, videos, and other types of materials; referrals to organizations and groups involved in deaf-blindness; and an extensive web site. DB-LINK has also produced a number of publications on a variety of topics including communication and orientation and mobility, and in collaboration with NTAC, publishes the newsletter *Deaf-Blind Perspectives* three times a year. Information specialists are available to respond to individual requests for information, including in-depth research.

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Web: www.tr.wou.edu/dblink

NFADB, The National Family Association of Deafblind

is a great resource for information, support, and camaraderie. Through a network of regional volunteers, families can connect with other families and locate support, advocacy, and experience close to home. In cooperation with NTAC, the organization holds a summer workshop for families each year. The association also publishes a great newsletter three times a year.

(800) 255-0411, ext. 275
E-mail: nfadb@aol.com
Web: www.nfadb.org

All of these resources are available for parents and other people involved in the lives of deaf-blind children. It's easy to connect with the folks who are there to help you.

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Fall Start-Ups Focus on Learning: New Model Demonstration Grants

Gail Leslie, DB-LINK

For 20 years, the federal government has supported the education of deaf-blind children with demonstration or research grants that are designed to foster innovation, validate practices, and develop effective service components. Many of the current practices, techniques, and materials that support practitioners have grown out of this program. Three new model demonstration projects were awarded funding in 1999. All three focus on learning needs and strategies. They are directed by researchers who each have a history of directing other projects under this program.

Project SALUTE: Successful Adaptations for Learning to Use Touch Effectively

For many children who are deaf-blind, tactile communication is the primary mode of learning and communication. What are the best ways to teach tactile communication? When should instruction begin? Is there a standardized vocabulary? These are just some of the questions that will drive the work of Project SALUTE. Working with a National Advisory Committee and focus groups across a number of states, project staff will identify, develop, document, and validate tactile learning strategies for children, infants through elementary school age. One focus group in particular will be done with Spanish-speaking families in order to produce materials that are culturally responsive. Materials produced by the project will include a manual and videos for both home and school environments that will be in English, close-captioned, and in Spanish. Researcher and Project Co-Director Deborah Chen's expertise includes identification of and early intervention practices for infants who are deaf-blind, establishment of quality indicators of early intervention services, and work with families. She will co-direct this project with June Downing whose work in the field has included research and development of curricula, and training modules in communication.

Project Contact:
Deborah Chen, Ph.D.
California State University, Northridge
18111 Nordhoff St.
Northridge, CA 91330
(818) 677-4604
E-mail: deborah.chen@csun.edu

Project SPARKLE: Supporting Parent Access to Resources, Knowledge, Linkages and Education

For families of children who are deaf-blind, information is essential for meeting the specific needs of their child. Changes in the Individuals with Disabilities Education Act (IDEA) have expanded the role parents play in their child's education, and parents are finding that they need skills and information to support their participation. Focusing specifically on deaf-blindness, Project SPARKLE will develop a new model of individualized learning that can be tailored to meet specific child and family needs. Using internet technologies and a web site that will be developed for the project, families will have access at home, to training opportunities, materials, community resources, and connections to other families at times that are convenient and meet their needs. Support will also be provided for individualized child programming through state facilitators and parent partners and will extend into the IFSP/IEP process. Project Director Linda Alsop's previous projects have included design and delivery of home based early intervention services, design of training programs to increase the effectiveness of intervenors, and Project PRIDE, a technology project.

Project Contact:
Linda Alsop
SKI-HI Institute
Utah State University
6500 Old Main Hill
P.O. Box 6582
Logan, UT 84321
(435) 797-5598
(435) 797-5586 (tty)
E-mail: lalsop@cc.usu.edu

Learning to Learn: A Systematic Child-Centered Model for Skill Development in Young Children who are Deaf-Blind

Researchers Charity Rowland and Philip have conducted projects centered on communication development, learning, and assessment for nearly 10 years. Their new project builds on the strategies and techniques of past projects to develop tools that promote specific skill development in children who are deaf-blind. Targeting children ages 3-8 years, this project will focus on the fundamental skills necessary to understand and master the social environment (communication and interaction) and the physical environment (manipulating objects and negotiating obstacles). The approach will be to apply individualized instruction that harnesses the motivation unique to each child to better determine how learning unfolds. Interventions will be designed to optimize the child's current skills and support the development of new ones. Learners will also include parents who will learn skills necessary to nurture learning at home and teachers who will improve their skills in creating classroom environments that nurture learning. A five-module program, Learning to Learn, will be developed. Following the demonstration phase in Oregon public schools, five additional states will participate in field testing.

Project Contact:
Charity Rowland
Oregon Health Sciences University
3608 SE Powell Blvd.
Portland, OR 97202
(503) 232-9154 x115
(800) 410-7069 tty
E-mail: rowlandc@ohsu.edu

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NTAC

NTAC Updates

NTAC (The National Technical Assistance Consortium for Children and Young Adults Who Are Deaf-Blind) provides technical assistance to families and agencies serving children and young adults. The following are descriptions of some of the recent state and national activities that NTAC has participated in.

New Hampshire

ASSETT (Assistive Services to Schools for Education, Technology & Training), the New England Center for Deaf-Blind Services (NEC), and NTAC started the 1999-2000 school year off with a bang by holding a 2-day workshop on communication for deaf-blind students. Dr. Mary Morse, Special Education Consultant with ASSETT, provided in-depth training to teachers and paraprofessionals. Topics covered during the first day of the workshop included early language development, symbolic communication, and augmentative communication systems. The second day focused on strategies for learners with more advanced communication systems. Dr. Morse and NEC will be visiting and providing technical assistance to the workshop participants throughout the school year.

Pennsylvania

The Pennsylvania Deaf-Blind Project and NTAC are working together to begin a new project called BEST (Building Effective Student Teams). Five BEST teams, selected from across the state of Pennsylvania, will receive training in effective practices associated with teaching students who are deaf-blind. The teams will also receive intensive on-site follow-up training throughout the school year as they begin to use the new skills.

Delaware

The Delaware Deaf-Blind project continues to collaborate with NTAC and several state agencies to support the Community Employment Initiative. The goal of this statewide initiative is to improve and expand community employment for individuals who are disabled, including those who are deaf-blind. Based on their experiences and research, the agencies participating in this initiative plan to release a summary of recommendations to improve employment practices throughout the state.

Arkansas

The Arkansas Project for Children with Deafblindness and NTAC recently completed a series of workshops that provided training to families, teachers, other service providers, and community members. The purpose of the workshops was to build the capacity of teams of individuals to provide effective programming for individuals who are deaf-blind and obtain new information and skills based on current practices. Each team received training in the following areas: an overview of deaf-blindness, communication, design and implementation of IEPs, educational strategies, transition planning and programming, and person-centered planning.

Georgia

The Georgia Deaf-Blind Project and NTAC are currently collaborating on some very promising initiatives focusing on family issues. The deaf-blind project recently hired an energetic family representative to help organize family initiatives and guide parents through the process of becoming a possible state chapter of NFADB. The project is also hosting an exciting statewide workshop for siblings and is developing a team of educational advisors to aid the transition of students and their families through the educational system.

National Meeting on Alternate Assessment

This past August, NTAC sponsored a 2-day national meeting in Salt Lake City, to address the alternate assessment needs of students who are deaf-blind. Seventy-seven participants from state and multi-state deaf-blind projects in 41 states, Puerto Rico, and the Pacific Basin attended. The purpose of the meeting was to discuss and share strategies about issues related to the implementation of IDEA '97 statewide and alternate assessment requirements.

Drs. Jacqui Farmer Kearns and Jennifer Grisham-Brown from the University of Kentucky presented strategies for developing IEPs for deaf-blind students based on state assessment standards and suggested ways that project directors could use the results of their state assessment data to develop technical assistance activities. Dr. Robin Greenfield (Idaho) and Dr. Suzanne Swaffield (South Carolina) provided overviews of their states' assessment models, and John Killoran from NTAC provided an overview of IDEA '97 and its alternate assessment requirements.

For Your Library

Better IEPs: How to Develop Legally Correct and Educationally Useful Programs
Bateman, Barbara D., & Linden, Mary Anne. Longmont, CO: Sopris West, 1992-1998.

This is a how-to guide that parents and educators can use to develop appropriate educational plans for children with disabilities. It provides tools for creating IEPs that conform to the law and explains the role of the IEP in the larger context of IDEA implementation. Available from: Sopris West, 4093 Specialty Place, Longmont, Colorado 80504, (303) 651-2829, http://www.sopriswest.com

Blind and Visually Impaired Students: Educational Service Guidelines
Pugh, G.S. & Erin, J. (Eds). Watertown, MA: Perkins School for the Blind, 1999.

The intention of this guideline, produced by NASDSE (National Association of State Directors of Special Education) and the Hilton/Perkins Program is to provide assistance to state and local education agencies, service providers, and parents. It describes essential program elements and features that must be considered when designing appropriate services for students who are blind or visually impaired, including students with multiple disabili-

ties. There is no cost for the publication. Available from Publications & Public Relations, Perkins School for the Blind, 175 N. Beacon St., Watertown, MA 02472, (617) 972-7250, Fax (617) 972-7334.

The Complete IEP Guide: How to Advocate for Your Special Ed Child
Siegel, Lawrence M; Berkeley, CA: Nolo.com, 1998.

The purpose of this book is to help parents effectively proceed on their own through the IEP process. It focuses on children between the ages of 3 and 22. It includes information about special education laws and the issues and tasks involved in IEP development. Available from: Nolo.com, Inc., 950 Parker Street, Berkeley, CA 94710, (800) 955-4775, http://www.nolo.com

Deaf-Blind Contact Directory 1999-2000
American Association of the Deaf-Blind, 1999.

Includes contact information for AADB members, state and local organizations, services for deaf-blind people, telecommunication relay services, and distributors and manufacturers of assistive technology and other products. Available from the American Association of the Deaf-Blind, 814 Thayer Avenue, Suite 302, Silver Spring, MD 20910-4500. TTY (301) 588-6545, Fax (301) 588-8705, aadb@erols.com

Elderly Deafblindness : Proceedings from 3rd European Conference of Deafblind
International's Acquired Deafblindness Network, Marcelli di Numana, 2-7, 1998.

Proceedings from the first international conference to focus specifically on elderly deaf-blind individuals. The complete text of the plenary sessions is included in these proceedings. Text and overheads from some of the workshops are also included. The entire proceedings are available on the web: http://www.deafblindinternational.org/papers/elderly.htm It may also be ordered from Lega del Filo D'oro, Via Montecerno 1, Osimo (Ancona) 60027 Italy, +39.071 72451, Fax +39.07171.7102, green.lfo@usa.net

Essential Elements in Early Intervention: Visual Impairment and Multiple Disabilities
Chen, Deborah (Ed.), New York: AFB Press, 1999.

This book presents information about assessment and intervention strategies for infants and young children (birth to 36 months) who have visual impairment in addition to other disabilities, including deaf-blindness. Available from AFB Press, Customer Service, P.O. Box 1020, Sewickley, PA 15143, (800) 232-3044, http://www.afb.org

A Guide to Planning and Support for Individuals Who Are Deafblind
McInnes, John M. (Ed.), University of Toronto Press, 1999.

This book focuses on individuals who were born deaf-blind or acquired the disability early in life. Topics include identification, communication, cognitive development, social and emotional development, sexuality, and family issues. Available from University of Toronto Press, Inc., 5201 Dufferin Street, North York, Ontario, (800) 565-9523, utpbooks@utpress.utoronto.ca http://www.utpress.utoronto.ca

Teaching Communication Skills to Students with Severe Disabilities
Downing, June E., Baltimore: Paul H. Brookes Publishing Co., 1999.

Helping students with severe disabilities communicate as effectively as possible with teachers and classmates in general education environments is the scope of this book. Much of the information may also apply to other settings such as home, community and workplace environments. The focus is on students with severe cognitive disabilities or developmental delay, autism, severe sensory impairments (including deaf-blindness), or severe physical disabilities.

Implementing Universal Newborn Hearing Screening Programs
White, Karl R. & Maxon, Antonia Brancia. Logan, UT: National Center for Hearing Assessment and Management, 1999.

Widespread acceptance of the need to identify hearing loss at an early age has given rise to early identification programs for newborns. This booklet provides a checklist of 13 points to assist hospitals in designing a universal newborn hearing screening program. Available from the National Center for Hearing Assessment and Management, Utah State University, 2880 Old Main Hill, Logan UT 84322, (435) 797-3589. The complete text is on the web at http://www.infanthearing.org/impguide

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Upcoming Conferences

February

Ninth Symposium on Literacy and Disabilities
February 3-4, 2000
Cary, North Carolina

Contact:
Office of CME, CB# 7321, Chase Hall
University of North Carolina School of Medicine
Chapel Hill, NC 27599-7321
Phone: (919) 962-2118
Fax: (919) 962-1664
jcox@css.unc.edu
http://www.alliedhealth.unc.edu/lit2k

March

14th Josephine L. Taylor Leadership Institute
March 3-5, 2000
Dallas, Texas

The theme this year is "Achieving an Accessible World: Partnerships, Roadblocks, and Opportunities."

Contact:
Gabriella Smith-Coventry
American Foundation for the Blind
11 Penn Plaza, Suite 300
New York, NY 10001
Phone: (212) 502-7654
Fax: (212) 502-7773
gsmith@afb.net
http://www.afb.org

16th Annual PAC RIM 2000 Conference
March 6-7, 2000
Waikiki, Hawaii

The Pacific Rim Conference is an international forum on disability studies. Sessions focus on critical issues and innovative strategies that make a difference in the lives of people with disabilities. This year's theme is "Creating Futures: Kaleidoscopes of Opportunity for People with Disabilities."

Contact:
Valerie Shearer
Center on Disability Studies
Hawaii University Affiliated Program
1776 University Ave., UA 4-6
Honolulu, HI 96822
Phone: (808) 956-2673
valerie@cds.hawaii.edu
http://www.cds.hawaii.edu

15th Annual International Conference, "Technology and Persons with Disabilities"
March 20-25, 2000
Los Angeles Airport Hilton Hotel and the Los Angeles Airport Marriott Hotel

Contact:
Center on Disabilities
California State University, Northridge
18111 Nordhoff Street
Northridge, CA 91330-8340
Phone: (818) 677-2578 (Voice/TTY)
Fax: (818) 677-4929
ltm@csun.edu
http://www.csun.edu/cod/

Focus on Access Technology
March 29-31, 2000
Minneapolis, Minnesota

Contact:
Katherine Evans
Rehabilitation Research and Training Center on Blindness and Low Vision
Mississippi State University
P.O. Box 6189
Mississippi State, MS 39762
Phone: (662) 325-2001
kem1@ra.msstate.edu

April

Council for Exceptional Children's Annual Convention and Exposition
April 5-8, 2000
Vancouver, BC, Canada

Contact:
The Council for Exceptional Children
1920 Association Drive, Reston, VA 20191-1589
Phone: (888) 232-7733
TTY: (703) 264-9446
Fax: (703) 264-9494
http://www.cec.sped.org

Australian National DeafBlindness Conference "Deafblindness: Keeping In Touch Beyond 2000"
April 7-19, 2000
Fremantle, West Australia

Contact:
WA Deafblind Association
PO Box 14
Maylands, Western Australia 6051
Phone: +61 8 9272 1122
Fax: +61 8 9271 3129
TTY: +61 8 9370 3524
wadba@nw.com.au
http://home.connexus.net.au/~dba/confer.htm

May

International Parent to Parent Conference: "Pioneering Spirit - Blazing New Trails"
May 4-7, 2000
Reno, Nevada

Contact:
Cheryl Dinnell
Nevada Parent Network
University of Nevada, Reno
COE, REPC/285
Reno, NV 89557
Phone: (775) 784-4921, ext. 2352
Fax: (775) 784-4997
cdinnell@scs.unr.edu
http:// www.unr.edu/repc/npn

June

Early Connections: Developing Partnerships in Services to Young Children with Visual Impairments (birth to age 8)
June 4-8, 2000
Vancouver, BC, Canada

Contact:
Hilton/Perkins Program
175 N. Beacon St.
Watertown, MA 02472
Phone: (617) 972-7447
Fax: (617) 923-8076
hiltonperkins@perkins.pvt.k12.ma.us

July

2000 AER International Conference
July 15-19, 2000
Denver, Colorado

Contact:
Association for Education & Rehabilitation of the Blind & Visually Impaired (AER)
4600 Duke Street, Suite 430
P.O. Box 22397
Alexandria, VA 22304
Phone: (703) 823-9690
Fax: (703) 823-9695
http://www.aerbvi.org

American Association for the Deaf-Blind Conference
July 29-August 1, 2000
Columbus, Ohio

The theme for this conference is *21st Century, the Deaf-Blind Move On!*

Contact:
AADB
814 Thayer Ave., Suite 302
Silver Spring, MD 20910-4500
TTY: (301) 588-6545
Fax: (301) 588-8705
aadb@erols.com

August

National Conference of the Foundation Fighting Blindness: Visions 2000
August 10-13, 2000
Orlando, FL

Contact:
The Foundation Fighting Blindness
Executive Plaza 1, Suite 800
11350 McCormick Road
Hunt Valley, MD 21031-1014
Phone: (888) 394-3937
TTY: (800) 683-5551
http://www.blindness.org

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Deaf-Blind Perspectives

Volume 7, Issue 3 Spring 2000

Lessons from Project PLAI in California and Utah: Implications for Early Intervention Services to Infants who are Deaf-Blind and Their Families

Deborah Chen, Ph.D., California State University, Northridge
Linda Alsop, M.Ed, SKI-HI Institute, Utah State University
Lavada Minor, M.A., California State University, Northridge

Appropriate early intervention services are important for the development of communication skills in infants who are deaf-blind. Oftentimes, however, early intervention programs are not staffed by people knowledgeable about the specialized needs of infants who have both visual impairment and hearing loss. One of the goals of a recent project called Project PLAI (Promoting Learning Through Active Interaction), was to develop resource materials that early intervention programs could use to teach families how to promote their infants' communication development. Early intervention programs provide services for children from birth to age three. The teachers and other service providers who work with children in these programs are called early interventionists.

Project PLAI was a research-to-practice project funded by the U.S. Department of Education Services for Children with Deaf-Blindness. It involved faculty at California State University, Northridge and California State University, Los Angeles working together with the SKI-HI Institute at Utah State University and early intervention programs in both states. Project PLAI developed an early communication curriculum (Klein, Chen, & Haney, in press) and accompanying videotape (Chen, Klein, and Haney, in press). The project then evaluated these materials while training early interventionists to use the curriculum with families and their infants who are deaf-blind. The curriculum contains five sections with strategies for recognizing communication behaviors, responding to them, and thus supporting early communication development. (An outline of the modules accompanied by a case study demonstrating their use follows this article).

In a 1995 article, Chen & Haney described the underlying principles of the PLAI model. In the final report (1999), they documented the validation process, widespread training activities, and the project's many outcomes. This article describes how the project was implemented in southern California and Utah. It notes the extensive challenges to effective early intervention services and presents ideas for improving them.

In This Issue

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Diversity of Project Participants

The field-test group consisted of 25 infants, their caregivers, and early interventionists in southern California and Utah—those who completed all project activities. (Seven other infants and families began the project but were unable to continue because of the infant's medical needs or family situations.)

Infants. All infants had significant and multiple disabilities in addition to visual impairment and hearing loss. Half had gastrostomy tubes (a type of feeding tube), and a similar number had seizures. One-third were on respirators, a quarter had tracheostomies (an opening into the trachea through the neck into which a breathing tube is inserted), and most had been hospitalized at least once since birth. One third of the infants had hearing aids and

some had glasses, but few of them wore their hearing aids or glasses consistently.

Cortical visual impairment was the most common cause of vision loss, occurring in two-thirds of the infants. Other visual problems included refractive errors, retinal problems, coloboma, microphthalmia, and other congenital ocular anomalies. A quarter of the infants had no functional vision. More than a third did not respond to sound consistently. Half had slight-to-mild hearing losses, a quarter had moderate losses, and a quarter had severe or profound losses. All of the infants had moderate-to-profound developmental delays, and half had physical disabilities.

The infants were between 8 and 33 months old (mean 19.8 months) when they began the curriculum and between 14 and 50 months (mean 31.6 months) when they completed it. Families took between 6 and 21 months to complete the curriculum (average 13.8 months). A quarter completed it in 6 to 8 months. Others needed more time because of their infants' medical needs, hospitalization, family situations, and other factors such as early interventionist's schedules and priorities, and winter weather in Utah that sometimes made travel difficult.

Caregivers. The primary caregivers participating in the project were the children's mothers (including a foster mother and a grandmother). Several fathers were also involved in project activities. These 25 families represented a variety of educational, socioeconomic, and linguistic backgrounds. Two parents had just two years of school, most were high school graduates, some had college degrees, and two had doctoral degrees. Their cultural backgrounds included African-American, Euro-American, and Hispanic. Some Hispanic families were bilingual, and others spoke only Spanish.

Early Interventionists. In southern California, participating programs involved two private agencies and three local educational districts. In Utah, the families received services from the Deaf-Blind Services Division of the Utah Schools for the Deaf and the Blind. Some early interventionists worked with more than one family participating in the project and some families had more than one early interventionist working with them.

Sixteen early interventionists completed the curriculum with their families. They had a variety of qualifications: One was a paraprofessional (high school graduate and parent of a child with a disability); two had credentials and master's degrees in the area of deaf and hard of hearing; one had a credential in the area of visual impairments; one had a credential in the area of deaf-blindness and a master's degree; five had bachelor's degrees in child development or related fields and inservice training in early intervention; and two had master's degrees in special education (one in orientation and mobility and the other in severe disabilities) but minimal back-

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ground in early intervention. Two were completing their master's degrees and credentials in early childhood special education, and two others were working on a credential in early intervention competencies.

The families and the early interventionists participated in an annual focus group meeting (held in Northridge and Salt Lake City) to evaluate the curriculum process and project activities. Their feedback was invaluable. It guided project procedures and supplemented evaluation data collected from videotaped observations, interviews, and recording sheets. The usefulness of the curriculum was thus validated in spite of the diversity of the families and infants and the diversity of qualifications of the early interventionists.

Training The Early Interventionists

The project trained early interventionists to use the curriculum with caregivers during their regular weekly or monthly home visits with the infant. (Factors such as illness or hospitalization of the infant, family situations, other appointments, IFSP meetings, or weather conditions sometimes caused this schedule to vary.) Videotape segments of the infant and caregiver during selected activities and interview information about the infant's communication were used during the training. These same materials were then used by the early interventionists to teach caregivers to use the curriculum strategies. Before training, most of the early interventionists in southern California were not familiar with the key concepts of the curriculum, with strategies for working with infants who are deaf-blind, or with teaching techniques and data collection. At first, some had difficulty integrating the PLAI strategies into their typical home visit activities. They also needed assistance explaining the strategies to caregivers. Many were not yet proficient interviewing or coaching families, or in maintaining contact to complete an objective if a home visit was cancelled. However, once early interventionists and families became familiar with the curriculum, it became easier to use, and the modules were completed more quickly.

In California, early interventionists received training on the curriculum at California State University, Northridge (4 half-day or 2 all-day sessions), with time between each session to use specific modules with the families. They then received follow-up support from one of two part-time project coordinators (one was bilingual in Spanish and English) who discussed parts of the curriculum that had been covered during training, provided examples of how particular objectives might be taught, demonstrated how to explain concepts to caregivers, and showed how to complete the data collection sheets. The coordinators also collected baseline and ongoing data through interviews and videotaped observations during home visits with the family.

In Utah, two all-day training sessions (with time to use specific modules between each session) was provided for three deaf-blind consultants who already had significant inservice training and experience in early intervention and deaf-blindness. They were already skilled in explaining learning activities to caregivers and interveners (paraprofessionals who worked with the child at home) and were familiar with most of the strategies in the early modules of the curriculum. These consultants learned new strategies from PLAI, including use of a behavioral analysis of infant responses by identifying antecedent events and consequences, turn-taking routines, interruption and delay strategies, and data collection. They required some support from the project in completing data collection sheets. The project coodinator at the SKI-HI Institute collected baseline and ongoing data through interviews and videotaped observations.

Challenges for Early Intervention Services

Limited Numbers of Trained Interventionists. A major challenge in southern California is a lack of early interventionists trained to work with infants who are deaf-blind. Under Part C services in California, infants with visual impairment, hearing loss, and deaf-blindness with no additional disabilities, are served by school districts. Disabled infants who have other low incidence disabilities (including cognitive delays and multiple disabilities including visual impairment and/or hearing loss) usually receive services from early intervention programs at private agencies. These are contracted by regional centers funded through the Department of Developmental Services. However, school districts continue to serve infants with a range of disabilities if they did so before 1986 when the passage of P.L. 99-457 provided a federal incentive for states to address the needs of infants and toddlers with disabilities and their families. Thus some infants in the project received services from private early intervention programs and others from public schools. Early interventionists in school district programs have a variety of credentials in special education although it is likely that few have received preservice or comprehensive inservice training in working with infants with severe and multiple disabilities or who are deaf-blind. Service providers in private agencies

may be even less qualified since the Department of Developmental Services has not implemented early intervention personnel standards.

In Utah, early interventionists called "deaf-blind consultants" (from the Utah School for the Deaf and the Blind) and interveners provide early intervention services. Interveners provide direct services to the child approximately 10 hours a week and the consultants provide parent education and support during bimonthly home visits. Interveners receive state-sponsored intervener training from the SKI-HI Institute and the Utah School for the Deaf and the Blind. Deaf-blind consultants have bachelor's or master's degrees in special education with inservice training in deafblindness through an 82-hour intervener training course and ongoing professional development opportunities. Utah does not have certification in the area of deaf-blindness, but has developed personnel competencies in deaf-blindness early intervention.

In Utah, infants who are deaf-blind may also receive services from general early intervention programs for physical or occupational therapy, service coordination, speech and language therapy, and nursing. They also receive services from the Parent Infant Program at the Utah School for the Deaf and the Blind, whose teachers are certified in visual impairments or in the deaf and hard of hearing area.

Lack of Early Identification and Follow-Up. Another challenge to providing early intervention services in both California and Utah is the lack of early reliable identification of visual impairment and hearing loss, especially when infants have multiple disabilities. Sometimes this occurs because other medical survival needs are considered to be more important. In other cases, visual impairment may be diagnosed but the infant's hearing status is unknown. This year, California has begun universal infant hearing screening in about 200 hospitals that are approved by California Children Services and in others that have neonatal intensive care units. However, coordination of screenings, follow-up, and early intervention services still needs to be developed.

Universal hearing screening for infants in Utah began in 1993, but was not mandated until 1998 and not fully implemented until July 1999. Hospitals refer infants who have failed screening to a state or local early intervention agency, the school for the deaf or the school for the blind, or to the infant's physician for diagnostic evaluation. The health department coordinates follow-up and referrals to early intervention services when necessary.

In southern California, several families involved in Project PLAI, particularly those who do not speak English, did not know how to obtain vision and hearing evaluations for their infants. In both California and Utah, when infants were diagnosed as having a visual impairment and hearing loss plus other significant disabilities, few received glasses or hearing aids when appropriate. Most of those who did have glasses or hearing aids did not wear them consistently. We believe this lack of follow-up was influenced by the infants' medical needs and disabilities and by the priorities of families and early intervention programs. Additionally, some audiologists and ophthalmologists may not prescribe glasses or hearing aids if the infant has intensive medical needs and significant developmental delays. Further, insurance or financial difficulties prevented some families from obtaining hearing aids or glasses that were prescribed for their infants, and some early intervention programs failed to provide follow-up support in this area.

Implications for Improving Early Intervention Services

Our experience in Project PLAI has identified essential aspects of providing appropriate early intervention services to infants who are deaf-blind and their families. First, the shortage of qualified personnel serving these infants and families requires organized preservice and inservice training efforts to increase professional competencies not only in specialized skills related to the infant's multiple disabilities and sensory impairments, but also in general skills. These include (a) working with families of diverse backgrounds, (b) coaching families in communication strategies with their infants, (c) encouraging the use of hearing aids and glasses when prescribed, (d) weaving intervention strategies into the family's routine, (e) collecting data, and (f) participating as a member of an interdisciplinary team. The multiple learning needs of infants who are deaf-blind require qualified professionals who can help families obtain appropriate medical treatments, hearing and vision evaluations, and other related services.

Second, the complexity of these infants' learning needs demands a team approach. Service providers need to meet with each other and with families in order to plan how to best meet the infant's needs and the family's concerns.

Third, families receiving services through home visits need regular contacts with other families and service providers. Although the home is a "natural environment," many parents in the project felt iso-

lated and indicated that they appreciated the annual focus group meetings. Most of these parents wanted additional opportunities for contact with other families who had children with similar learning needs.

Further, Spanish-speaking families participated more actively in groups with others who spoke their language than in those where they had to rely on communication through interpreters. The large Spanish-speaking population in southern California requires the recruitment and training of bilingual early interventionists, development of appropriate materials for Spanish-speaking families, and opportunities for these families to meet each other.

Summary

Providing early intervention services to infants who are deaf-blind and their families is complicated. Not only do the age, abilities, and needs of each infant require an individualized approach, but also family priorities, home culture and language, location, program resources, and state policies influence the nature of intervention services. These complexities emphasize the need for state technical assistance projects and other state agencies to work together to provide professional development activities for service providers and educational and networking opportunities for families of infants who are deaf-blind.

References

Chen, D., & Haney, M. (1995). An early intervention model for infants who are deaf-blind. *Journal of Visual Impairment & Blindness*, 89, 213-221.

Chen, D., & Haney, M. (1999). *Promoting learning through active interaction. Project PLAI. Final report.* California State University, Northridge. (ERIC Document Reproduction Service No. ED432118)

Chen, D., Klein, M.D., & Haney, M. (in press). *Promoting learning through active interaction: An instructional video.* Baltimore: Paul H. Brookes. (Video in English and Spanish)

Klein, M.D., Chen, D., & Haney, M. (in press). *Promoting learning through active interaction: A guide to early communication for young children who have multiple disabilities.* Baltimore: Paul H. Brookes. (Caregiver handouts in English and Spanish)

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Research-to Practice: PLAI Curriculum Modules and Case Study

The PLAI curriculum modules are listed below, followed by examples of how each was used with a 14-month old child named Michael. The examples follow Michael, his mother, Cecelia, and his older sister, Kate, as they go through the five modules. Michael was born very prematurely at 26 weeks gestation. He weighed 1 pound, 8 ounces. At the time he was discharged from the hospital, he had been diagnosed with multiple disabilities, including severe retinopathy of prematurity, spastic cerebral palsy, and an undetermined degree of hearing loss. During his first year, his development was very slow. He was often irritable and feeding was difficult. Cecelia was very concerned and wanted to promote Michael's interest in communicating and playing.

Module 1: Understanding Child Cues

Goal: *Caregivers will develop a detailed picture of the ways in which the child expresses attention and interest, pleasure and discomfort, and needs and desires.*

Caregiver Objectives:

- Complete a Typical Daily Activities Form describing the child's typical day.
- Learn to identify the child's state of arousal.
- Through careful observation of antecedent events and consequences, develop a clear understanding of the child's typical reactions during familiar routine activities.
- Identify and describe ways in which the child obtains the attention of the caregiver and for what purposes.
- Describe how the child reacts to and expresses external states/feelings.

Describing a "typical day" was challenging. Cecelia's schedule was fairly unpredictable. She would sometimes help out in her uncle's bakery when they were shorthanded, usually in the late afternoon or evening when Kate could stay with Michael. And she would often baby-sit her sister's children. The most predictable events occurred early in the morning and late at night. The family got up at about 6 a.m. Cecelia would fix Kate's breakfast

and give Michael his bottle. After Kate left for school, Cecelia would give Michael a bath and dress him. For the rest of the day, the schedule was unpredictable until nighttime. Kate or Cecelia gave Michael his bottle. Sometimes Kate rocked him to sleep while watching TV.

When asked to think about Michael's reactions, states, and feelings, Cecelia thought about how Michael expressed pleasure and interest. He extended his arms and legs slightly, moved his head downward, and then became very still. She also recognized that Michael became upset *before* he actually started to cry—he would pull his head up, extend his legs, and clench his fists. As Cecelia observed Michael's reactions to familiar daily activities, she learned that when she went to lift him from the crib, he would automatically extend his arms and legs. She wondered how he could sense her presence, and at first thought maybe it was her imagination. But after several observations she realized that his response was consistent. He would always respond as she approached the crib.

After this discovery, Cecelia and Kate sought to discover other things they hadn't known about Michael. When he was drowsy or "tuned out," his head was turned to the side and slightly down. When he was alert and attentive, his head would move toward midline, though still down, and he would extend his arms and legs. When his head was up, he was actually becoming upset and over-aroused. Cecelia also discovered that when she took hold of Michael's hands and massaged his fingers (which she had always assumed he liked) his head would come up and his fist would clench slightly. But when she massaged his shoulders and upper back, his fists would relax and his head would turn to midline and down.

Module II: Identifying High and Low Preference Objects, Persons, and Events

Goal: *Caregivers will develop a thorough understanding of what their child enjoys and dislikes.*

Caregiver Objectives:

- Generate a detailed list of activities, persons, and objects that they believe the child enjoys and those the child dislikes.
- Describe child's reaction to the presentation and removal of specific objects, persons, and sensory events.

After the period of observing and learning more about Michael's cues, Cecelia and Kate could more easily identify Michael's preferences and aversions. His favorite things were his mom, cinnamon rolls, shoulder massages, and rocking in Kate's lap. He hated citrus fruits, being naked, and being immersed in water. He also didn't like having his hands touched or sudden loud noises.

Kate was particularly enthusiastic about this new project. She discovered that Michael had a good sense of smell; that he loved certain smells and hated others. His favorite seemed to be the smell of cinnamon rolls that Cecelia would bring home from the bakery. Kate could even get Michael to stop fussing by putting the cinnamon roll under his nose, then giving him a little taste. She also learned that when Michael smelled fruits like oranges or lemons, he would throw his head back and cry.

Module III: Establishing Predictable Routines

Goal: *Caregivers will create a daily routine that includes several predictable events that the child can anticipate through recognition of certain cues (words, sights, or other sensations).*

Caregiver Objectives:

- Create a predictable routine by identifying at least five daily activities that can be scheduled in the same sequence each day.
- Identify predictable sequences within specific activities (i.e., "subroutines").
- Identify and use specific auditory, visual, tactile, olfactory, and kinesthetic cues to help the infant anticipate familiar activities and daily events.

An early interventionist helped Cecelia realize that Michael could better understand what was going on around him if his daily events were more predictable. In addition to the early morning and evening routines, Cecelia decided to try to increase the predictability of Michael's routines in several ways. After he finished his morning bottle, he would always get a bath. After the bath, Cecelia would put lotion on him and give him a shoulder and back massage. At bedtime, she would give him his bottle and then Kate would rock him while watching TV. Cecelia also realized that she and Michael had developed "subroutines." For example, after removing Michael's diaper and cleaning him, she would blow on his tummy and say "Okay, all dry. All dry." Then she would sprinkle powder and put a new diaper on

him, say "All done," and give him a kiss while picking him up.

Other predictable routines and subroutines followed. Before going into Michael's room, Cecelia would always announce loudly, "Here comes Mommy." She would touch his shoulders before picking him up. Before putting him in the bath, she would put his foot in the water a couple of times, which helped him to stop screaming when he was placed in the tub. Before Cecelia gave Michael his back massage, she would rub some lotion on her fingers and let him smell it.

Module IV: Establishing Turntaking

Goal: *To develop and increase the child's participation in familiar turntaking routines.*

Caregiver Objectives:

- Using information gained in previous modules, learn how to encourage children to request "more" of a desired food or activity.
- Identify and extend any current turntaking routines and create new turntaking games through initiation.
- Generalize turntaking games across persons and settings.

In the first three modules, Cecelia focused on observing Michael and creating a more predictable environment. In Module IV, the emphasis was on helping him learn new behaviors. Getting him to request more of something he liked was the first objective. This was easy to do with the cinnamon and sugar icing from the cinnamon roll. Kate would let him smell it, then give him a taste with her finger. Kate learned that if she simply waited after giving Michael a taste, he would eventually open his mouth and bring his head to midline. Kate would then say, "Oh, you want another taste, don't you?"

Cecelia also used this strategy for Michael's backrubs. After massaging him for 30 seconds, she would stop and wait. Usually within 15 seconds, Michael would lift his head and extend his arms slightly, indicating he wanted more. From here, it was easy for Cecelia to develop a "turntaking game" with Michael. She simply shortened the massage to a few seconds, waited for him to extend his arms, massaged him for a few more seconds, and waited again. Although Cecelia had been worried that this would be frustrating to Michael, he seemed to catch on that they were playing a game, and this became a situation during which he consistently began to smile.

Module V: Encouraging Communicative Initiations

Goal: *To increase the child's rate of communicative initiations for obtaining attention from significant others, obtaining a desired object or pleasurable event, and expressing rejection.*

Caregiver Objectives:

- Learn to increase the child's initiations by encouraging the child to express rejection of a disliked object or activity.
- Learn to increase the child's initiations by delaying an anticipated event.
- Learn how to encourage the child to intentionally initiate and to obtain the caregiver's attention.

Now it was Michael's turn to learn to initiate communication. Kate and Cecelia decided to start with one of his most anticipated events—rocking with Kate before bedtime. After Cecelia gave him his bottle, Kate would usually take Michael, sit in the rocking chair, and turn on the TV. But now, instead of immediately starting to rock as before, she would simply sit there, not moving. At first, Michael made no response at all. He got very quiet and still as though trying to figure out what was wrong. Then he would extend his arms and legs and raise his head as he does when he is upset. As soon as he moved arms, Kate would say, "Do you want me to rock?" and she would start rocking him. In this situation, Michael was learning to initiate a request that something happen, not simply request more of something that was already going on.

The last objective in this module, intentionally gaining someone's attention proved to be difficult. The goal was to teach Michael to signal for attention even when Cecelia was not close by. Since Michael was starting vocalize more, she tried to get him to vocalize to get her to come to him. Whenever he was left alone in the infant seat, she would listen for him to vocalize. As soon as he did, she would enter the room and give him attention. But Michael's rate of vocalizing did not seem to increase. More often than not, when Michael thought he had been left alone, he would get agitated and cry.

Although Michael was still not really initiating communication to get someone's attention, Cecelia and Kate would continue to work on this goal. Nevertheless, Michael and Cecelia and Kate had changed in important ways since the beginning of the program. Cecelia felt that she understood Michael much better. She was more aware of his likes and dislikes,

better able to read his signals, and more consistent and patient in her interactions with him. Michael was also changing. He was much clearer in his communication. He seemed to communicate more with Kate and Cecelia. He was starting to vocalize more, spent more time in an awake alert state, and would even smile.

These modules and the case study were adapted and reprinted with permission from Klein, M.D., Chen, D., & Haney, M. (in press), *Promoting learning through active interaction: A guide to early communication for young children who have multiple disabilities*, Baltimore: Paul H. Brookes. (http://www.brookespublishing.com) 800-638-3775.

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Moon Code: A Valuable Supplement To Your Communications Arsenal

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Educational needs vary greatly, but the development of a means of communication is one of the most important educational goals of individuals who are deaf-blind or multiply disabled. For many persons unable to use vision or hearing effectively, several methods of communication that rely on the sense of touch have been developed. For a variety of complex reasons, some individuals with multiple disabilities have difficulty acquiring basic literacy by means of braille or large print. This has led to a search by educators, engaged in an ongoing fight to enhance student literacy, for other tactile methods with which to supplement their teaching arsenals. Over the years, in many Commonwealth countries, Moon code has retained its importance as a core element of individualized programs for students unable to use large print, or for whom braille is too difficult. This short paper will introduce the reader to Moon code and present its benefits in an attempt to promote its increased use in programs for students with multiple disabilities.

Moon: A Brief History

In Europe during the last two centuries, a variety of tactile reading systems, based on Roman letters, were developed. The most well-known of these, probably because of its historical importance as a predecessor of braille, is that invented by Valentin Haûy in France (Watkins, 1987). Other early systems used in Britain and Australia included Alston type (invented in 1838) and Lucas stenographic type, based on a dot, a curve, and a straight line. In 1871, this became the standard system used at the Sydney School for the Blind (Kelley & Gale, 1998). Another similar system that endured for some years was Boston Line Type, an angular modification of Roman letters in both upper and lower case, produced at the famous Perkins School in Massachusetts in 1835. The only modern survivor of these tactile systems is the Moon code.

The Moon code inventor, William Moon, was born in 1818 at Brighton, England. He became blind in one eye at 4 years of age from scarlet fever (Middleton, 1988) and totally blind at 21. Braille had been invented in 1829, but Moon felt that it was too complicated to teach. Simplicity, as Middleton has pointed out, was his keyword. His system, initiated in 1847, is generally thought to be much easier to learn than braille, especially by older or infirm persons, because it does not require a particularly sensitive touch.

Moon, initially working from home, devised tinned sheet iron plates on which he fixed Moon code characters created from tinned copper wire and began to print embossed books (Middleton). By December 1858, after 10 years of arduous labor he had completed the whole of the Bible, 5000 pages in 60 volumes. Because he did not become blind until later in life, Moon remembered colors and shapes, but he was aware that this was not the case for people who were born blind. For example, a blind girl of his acquaintance thought that horses, like people, walked upright on two legs. So he turned his attention to the production of tactile pictures such as maps and charts of the solar system, portraits of Queen Victoria, and Euclidian diagrams.

By 1892, with the help of colleagues, 551 works in English, and 221 works in foreign languages including Hindi, Dutch, and Swedish had been produced (Middleton). The system was introduced in Australia in 1874. In 1870, a wealthy patron, Sir Charles Lowther (himself blind), presented 2000 volumes of Moon type to New York for distribution in major American cities. In 1871, William Moon received an Honorary Doctor of Laws degree from the University of Philadelphia in recognition of his work. After a visit by Moon and his daughter Adelaide to the United States in 1882, books in Moon code were being mailed from Philadelphia to all parts of the nation. Moon died in 1894. The subsequent loss of impetus in promoting Moon code has been attributed to worldwide recognition of the relative compactness and flexibility of braille (Tobin & Hill,

1989). Moon code is still being produced in England, however, for use with children and adults who have special learning needs.

Moon Code

Moon's code consists of stripped-down and simplified versions of Roman capital letters (Mason & McCall, 1997). The letter A for example, appears without its crossbar, the letter D without its front vertical line. Nine letters of the alphabet are virtually unaltered from the standard Roman alphabet, seven letters have been slightly modified, and there are 10 new shapes (other letters and punctuation).

National Institute for the Blind (RNIB) and its National Library for the Blind. A revival of interest in the code is perhaps due to the introduction of a mechanical "Moonwriter" (Tobin & Hill, 1989). Other reasons for this resurgence have been provided by Gill (1985) and Maley (1987). In this regard, Tobin & Hill have claimed that not only is Moon a much tactually simpler system than braille for older people who become blind, it may also be "a feasible alternative for some less-able and multiply handicapped younger learners because of its smaller number of contractions." This has in fact been the case at the Royal Institute for Deaf and Blind Children at North Rocks near Sydney, where Moon script has proved a valuable supplement to the individualized pro-

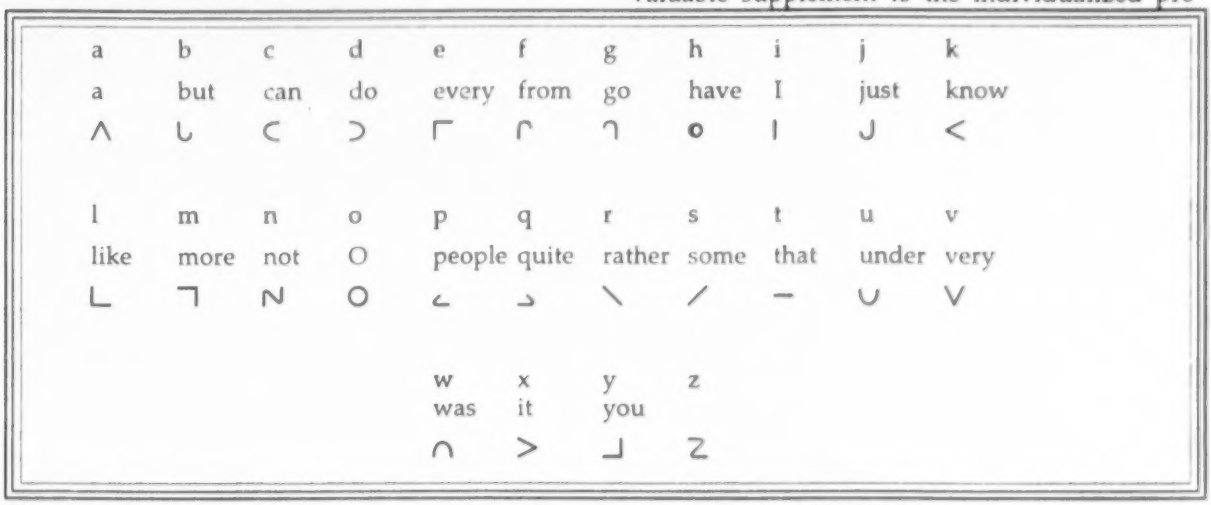
a b c d e f g h i j k
a but can do every from go have I just know
l m n o p q r s t u v
like more not O people quite rather some that under very
w x y z
was it you

Figure 1: Grade 1 Moon - *Produced with permission of Royal Institute for Deaf and Blind Children.*

Note: Moon is heavily contracted. The letter "c" also means "can", "d" means "do", and so on.

Fingers read the embossed letters by moving from left to right across the page, down to the next line, and then back across the page from right to left. In this way the reader does not lose his or her way as frequently. Middleton has asserted that Moon was fascinated to discover, many years after his invention, that his alphabet went back in style to the times of the Hittites and Ancient Egyptians and that the forwards-backwards style he had invented was called "boustrophedon" or "ox-ploughing" by the Greeks, because there was an analogy to going up one furrow and back the next. Moon's comment on his discovery was that "there is nothing new under the sun."

Moon Code Today

Although, as Mason and McCall (1997) have pointed out, moon script readership is small today, its production is still supported by Britain's Royal

grams for multiply disabled children at its Alice Betteridge School.

There is a down side. Moon script is bulky, cumbersome, and difficult to produce. Further, it is used in a limited range of available children's literature. There are currently no written rules or international conventions on its use. Despite these drawbacks, Moon characters present a larger tactile stimuli than standard braille cells and are therefore easier to feel. Using it does not require a well-developed sense of touch. Moon code may be used as a steppingstone to learning braille and has the added advantage that sighted teachers and volunteers, as well as relatives, can help teach the code because of its obvious similarities to the familiar printed alphabet. It is, therefore, a medium immediately accessible to local community members.

More Information:

The Moon Committee Working Group of Britain's Royal National Institute for the Blind (PO Box 173, Peterborough, England PE2 6WS) produced in 1994, an excellent kit entitled Moon Journey: Phase 2, a guide in large print.

RNIB (http://www.rnib.org.uk) also produces a comprehensive catalog of materials and supports entitled *Moon: What is available to help with reading, writing and learning*. Further, this large national agency produces a Moon Alphabet card, available free of charge, as well as a variety of teaching packages, the Moon Cat reading scheme, and newsletters.

Moon Font can be downloaded from RNIB Internet site http://www.rnib.org.uk/wesupply/archive/welcome.htm. Click on the moon font link to save a copy onto your own disk. RNIB also offers Moon Garden software.

Optek Systems (PO Box 277, Rydalmere, NSW, Australia 1701) markets an excellent high-tech moon embosser.

References

Gill, J.M. (1985). New Moon. British Journal of Visual Impairment, III (3), 85-86.

Kelley, P., & Gale, G. (1998). Towards excellence: Effective education for students with vision impairments. North Rocks, NSW: North Rocks Press.

Maley, T. (1987). Moon a la mode. The New Beacon, LXXI(840), 109-113.

McCall S. (1997). The development of literacy through touch. In H. Mason & S. McCall (Eds.), Visual impairment: Access to education for children and young people (pp.148-158). London: David Fulton.

Middleton, J. (1988). Moon, matches and microchips: A history of being blind in Brighton. [Online]. Available: www.bsblind.co.uk/large/moon/mmmicro.htm

Tobin, M. J., & Hill, E. W. (1989). Harnessing the community: Moon script, the Moon-Writer and sighted volunteers. The British Journal of Visual Impairment, VII(1), 3-5.

Watkins, K.W. (1987). Towards systematic education of the blind in Australia. Unpublished doctoral dissertation, Macquarie University, Sydney.

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NTAC

NTAC Updates

National Activity

Distance Learning Workshop (Paddi Davies)

NTAC and the state/multi-state deaf-blind projects deliver technical assistance and training to assist in meeting the needs of families and service providers of children and youth who are deaf-blind. This is not always an easy task. Two factors, geography and time, often make providing assistance difficult. New strategies for meeting needs are being explored. In February, NTAC hosted a two-day workshop on the use of distance learning methods to deliver technical assistance and training. Under the excellent instruction of Dr. Cyndi Rowland of Utah State University's Center for Persons with Disabilities, the workshop participants used the "Goodness of Fit" model to ensure there is an appropriate match between technical assistance and training outcomes, effective instructional strategies, and technology solutions.

Participants spent half a day in a computer lab learning about technologies such as web-based courses, video conferencing, chat rooms and discussion forums, and interactive CD-ROMs. Attendees from each state developed a plan to guide further exploration into the use of technology to meet their technical assistance and training outcomes. We look forward to watching the states make progress in this exciting new arena. We anticipate many positive results for service providers, families, and children and youth who are deaf-blind.

State Activities

Kansas (Jon Harding)

NTAC helped sponsor a "Transition Connections" workshop last February in Kansas City. Four teams, consisting of parents and professionals, met to refine their skills in person-centered futures planning (PCFP). Each team assists one individual with disabilities ("focus person") transition from student to adult life. The PCFP process is designed to assist each team to meet the needs of the individual by providing a framework that encourages achievement of long-range goals. Two parents from Topeka inspired the group with a story of their struggle (and

ultimate success) in acquiring independent living for their children who have severe disabilities. Each team left the workshop with a plan to assist them in helping their focus person reach his or her potential.

North Dakota (Jon Harding)

In April, the North Dakota Deaf-Blind Services Project is hosting, in conjunction with NTAC, a training opportunity for outreach workers from the School for the Blind and the School for the Deaf. The outreach workers provide assistance to students in their home environments. Attendees will learn about the unique needs of deaf-blind individuals and ways to address those needs. Tentatively scheduled topics include communication, assistive technology, effective practices, assessment, orientation and mobility, and an overview of deaf-blindness.

South Carolina (John Eisenberg)

The South Carolina Deaf-Blind project is entering an exciting new phase. The project has recently embraced an initiative to develop transition teams throughout the state. They are looking forward to providing training sessions for new team members about how to work as a team. NTAC is looking forward to being an active member in helping the transition teams reach their goals. NTAC has also worked closely with the deaf-blind project to help develop a strong technical assistance process to increase their presence throughout the state.

Mississippi (John Eisenberg)

The Mississippi Deaf-Blind Project is off to a fast start this year. The project and NTAC will focus its training efforts and materials development on strategies for communication and mobility for individuals who are deaf-blind. They are currently attempting to work with other agencies in the state that provide training opportunities. The purpose is to have information about deaf-blindness included in the course content of currently existing training programs on severe or profound disabilities. NTAC will be working with the deaf-blind project to help accomplish this goal. The project will also continue its current focus on transition planning and instructional strategies.

Rhode Island (Susanne Morgan)

Interested educators and related service providers from the Rhode Island School for the Deaf (RISD) developed a team devoted to issues associated with Usher syndrome. In order to meet the needs of students with this condition at their school, they sought training and support from NTAC. The team visited Helen Keller National Center in September 1999 for two days of training that was tailored to their needs. In March 2000, Susanne Morgan, NTAC Technical Assistance Specialist, provided follow-up training at RISD, met students and educators, and conducted an environmental assessment of the campus. A meeting to determine next steps was held.

Missouri (Jamie McNamara)

This past Winter, Missouri completed a second training session called "Best Practices in Employment for Individuals who are Deaf-Blind." It was attended by three employment teams who work with transition age deaf-blind students to help them obtain supported employment. NTAC helped plan and sponsor the training along with the Missouri Deaf-Blind Project.

Michigan (Jamie McNamara)

Michigan is working on strengthening an organization of parents who have deaf-blind children. A meeting to identify problems, barriers, and strategies occurred this spring. A membership retreat will be scheduled to involve more parents and identify further training needs. NTAC is supporting a consultant to work with the parent organization.

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For Your Library

Books & Articles

Literacy For Persons Who Are Deaf-Blind
Miles, B., DB-LINK, The National Information Clearinghouse On Children Who Are Deaf-Blind, January 2000.

Discusses the importance of literacy for persons who are deaf-blind, the social function of literacy, and the conditions necessary for the development of literacy. The complete document is available on the web: http://www.tr.wou.edu/dblink/literacy.htm or order from: DB-LINK, Teaching Research, 345 N. Monmouth Ave., Monmouth, OR 97361. Tel. 800.438.9376, TTY 800.854.7013, Fax 503.838.8150. Email: dblink@tr.wou.edu

Dimensions of Communication: An Instrument to Assess the Communication Skills and Behaviors of Individuals with Disabilities
Mar, H. H. & Sall, N., 1999, 82 pages.

An assessment instrument designed to help teachers, educational specialists, speech-language therapists, psychologists, and other service providers evaluate the communication skills of persons with multiple disabilities, including severe or profound mental retardation and deaf-blindness. Designed primarily for persons whose communication behaviors are basic, nonconventional, and/or nonsymbolic, but can also be used with individuals who have more sophisticated language skills. A videotape is also available. The cost is $15.00 each for the manual or videotape. Available from: Harvey H. Mar, Ph.D., St. Joseph's Children's Hospital, 703 Main Street, Xavier 6, Paterson, NJ 07503. Email: hhm1@columbia.edu

Transition Planning : A Team Effort
deFur, S. H., Transition Summary TS10, National Information Center for Children and Youth with Disabilities, January 1999, 24 pages.

Provides information about how students, families, schools, and service providers can work together to assist students with disabilities make a smooth transition from high school to adult life. Gives an overview of transition legal requirements and describes transition teams and collaboration. The complete document is available on the web (http://www.nichcy.org/pubs/transum/ts10.htm) or order from: NICHCY, P.O. Box 1492, Washington, DC 20013-1492, Tel./TTY 800.695.0285, Fax 202.884.8441. Email: nichcy@aed.org

Questions and Answers About IDEA
News Digest #21, 2nd ed., National Information Center for Children and Youth with Disabilities, January 2000, 11 pages.

Answers frequently asked questions about the mandates and requirements of the Individuals with Disabilities Education Act Amendments of 1997. The complete document is available on the web (http://www.nichcy.org/pubs/newsdig/nd21.htm) or order from: NICHCY, P.O. Box 1492, Washington, DC 20013-1492, Tel./TTY 800.695.0285, Fax 202.884.8441. Email: nichcy@aed.org

Practical Step by Step Guide for Students with Deafblindness who are Working Towards Greater Independence in the Workplace
Schram, E. A., Dawson Creek, B.C.: Swan Ventures, 1998, 124 pages.

A curriculum designed by a teacher of deaf-blind students about transitioning from school-to-work. Addresses vocational choices, locating employers, preparing for interviews, communication issues, and accommodating needs on the job. The cost is $30.00 (Canadian), shipping and handling included. Order from: Swan Ventures, 1140 102nd Ave., Dawson Creek, BC, Canada V1G 2C1. Tel. 250.782.5109. Email: ealdertn@pris.bc.ca

A Teacher's Guide to Communicating with Students with Deaf-Blindness
Engleman, M. D., et al, Teaching Exceptional Children, 31(5): 64-70, 1999.

This article uses two case study examples of students who are deaf-blind to illustrate the basic information that teachers need in order to develop meaningful educational and communication training.

IDEA 1997: Implications of the Transition Requirements
Policy Update, National Transition Network, University of Minnesota, January 2000, 6 pages.

A policy update about the regulatory language of IDEA 1997 transition requirements. Includes definitions of required services, exceptions to FAPE, requirements for students with disabilities in adult prisons, agency, parental and student notifications and participation, transfer of parental rights, content of the IEP, and agency responsibilities. Available from: National Transition Network, Institute on Community Integration, University of Minnesota, 103 U-Tech Center, 1313 SE Fifth St., Minneapolis, MN 55414. Tel. 612.627.4008.
Email: ici@mail.ici.coled.umn.edu

Captured by the Net: An Internet Guide for Blind Users
Espinola, O., Boston: National Braille Press: 1999, 97 pages.

A comprehensive guide about the Internet for blind users. Topics include a description of the Internet, how to choose an Internet service provider, purchasing a computer system, and setting up a computer to make it Internet ready. Available in print, braille, tape and disc from: National Braille Press, 88 St. Stephen Street, Boston, MA 02115. Tel. 800.548.7323. Web: http://www.nbp.org

Videos

Assume Nothing: Deafblindness – An Introduction
West Australian Deafblind Association, 1999, 22 minutes.

This video promotes deaf-blind awareness and may be used in conjunction with deaf-blindness training programs. Highlights 6 deaf-blind individuals, including an infant, two school-age children, and three adults. The focus is on individuality and communication. Addresses both congenital and adventitious deaf-blindness. Cost, including postage, is $30.00 (Australian) for PAL format (the format used in Australia) or $40.00 (Australian) for NTSC format (the format used in the US). Please make checks or bank drafts in Australian dollars. Order from: West Australian Deafblind Association, PO Box 14, Maylands, Western Australia 6051, Australia. Tel. +61 8 9272 1122, TTY +61 8 9370 3524, Fax +61 8 9370 3129. Email: wadba@nw.com.au
A second training video, Beginning Communication with Congenitally Deafblind Children, will be available soon.

Deafblindness and the Intervener
Utah State University: HOPE, Inc., 1998, 15 minutes.

Discusses the effective use of interveners. Interveners are shown working with children and youth who are deaf-blind in home, school, and community settings. Interviews are presented that give perspectives on intervention from parents, teachers, educational administrators, and interveners. Available from HOPE, Inc., 1856 North 1200 East, North Logan, UT 84341. Tel./Fax 435.752.9533.
Email: hope@hopepubl.com
Web: http://www.hopepubl.com

Web Site

Paraeducator Support of Students with Disabilities in General Education Classrooms

http://www.uvm.edu/~uapvt/parasupport

A project to develop, implement, and evaluate a model for the effective use of paraeducators to support students with disabilities in general education classes. Based at the Center on Disability and Community Inclusion at the University of Vermont.

For additonal information on any of these publications, contact DB-LINK - The National Information Clearinghouse on Children Who Are Deaf-Blind
Voice: 800.438.9376
TTY: 800.854.7013
dblink@tr.wou.edu

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Announcements

5th DbI European Conference on Deafblindness
Deafblind International (DbI) will be holding the 5th DbI European Conference on Deafblindness, July 24-29, 2001 in The Netherlands. The theme is "Self-Determination –a life long process." If you would like to be placed on a mailing list to receive information about the conference as it becomes available, send your name, address, and format desired (normal print, Braille, large print, cassette, or diskette) to:

Stichting 5th DbI European Conference on Deafblindness
Attn. Anneke Balder
P.O. Box 222
3500 AE UTRECHT
The Netherlands
Tel. +31 30 276 99 70
Fax +31 30 271 28 92
sdg@wxs.nl
Or go to the DbI website:
http://www.deafblindinternational.org

Camp Abilities: A Developmental Sports Camp for Children Who Are Blind and Deafblind
Camp Abilities is a week long residential camp held at State University of New York at Brockport. The Summer 2000 session is from June 25-July 1. The camp serves blind and deaf-blind children age 8 to 18. Activities include: track and field, swimming, goal ball, beep baseball, tandem cycling, gymnastics, canoeing, judo, archery, bowling, dancing, camping and horsebackriding. The camp is totally accessible for children who are deaf-blind. All deaf-blind children have 1:1 interveners. For more information contact:

Lauren Lieberman
SUNY Brockport
Department of Physical Education
Brockport, NY 14420
Tel. 716.395.5361, Fax 716.395.2771
llieberm@brockport.edu

Self-Determination: Creating a Path to the Future
NTAC and the Institute for Community Integration, University of Minnesota, are sponsoring a seminar for teens and young adults (ages 16-21) who are deaf-blind. It will be held during the American Association of the Deaf-Blind 2000 Conference in Columbus, Ohio, July 29-August 4. The purpose is to provide an opportunity for teens and young adults to increase their knowledge and skills in areas that

support greater self-determination. Space is limited and there are a number of eligibility requirements. For more information contact:

NTAC/HKNC
Attn: AADB Program
111 Middle Neck Road
Sands Point, NY 11050
Tel. 516.944.8900 ext. 307

Conferences

Early Connections: Developing Partnerships in Services to Young Children with Visual Impairments (birth to age 8)
June 4-8, 2000
Vancouver, BC, Canada

Contact:
Hilton/Perkins Program
175 N. Beacon St.
Watertown, MA 02472
Tel. 617.972.7447
Fax 617.923.8076
hiltonperkins@perkins.pvt.k12.ma.us
http://www.perkins.pvt.k12.ma.us/whatsnew.htm

National Federation of the Blind Annual Convention
July 2-8, 2000
Atlanta, Georgia

Contact:
National Federation of the Blind
1800 Johnson Street
Baltimore, MD 21230
Tel. 410.659.9314
epc@roudley.com
http://www.nfb.org/conbul00.htm

Colorado 2000 Summer Institute on Deafblindness
Remarkable Conversations: Nurturing Communication in the Culture of the Classroom
July 11-13, 2000
Breckenridge, Colorado

Contact:
Tanni Anthony
Colorado Department of Education
201 East Colfax Ave.
Denver, CO 80203
Tel. 303.866.6681
anthony_t@cde.state.co.us

2000 AER International Conference
AERODYNAMICS: Soaring to New Heights
July 15-19, 2000
Denver, Colorado

Contact:
Association for Education & Rehabilitation of the Blind & Visually Impaired (AER)
4600 Duke Street, Suite 430
P.O. Box 22397
Alexandria, VA 22304
Tel. 703.823.9690
Fax 703.823.9695
aer@aerbvi.org
http://www.aerbvi.org/activities/international.htm

American Association for the Deaf-Blind Conference
21st Century - the Deaf-Blind Moves On!
July 29-August 4, 2000
Columbus, Ohio

Contact:
AADB National Office
814 Thayer Ave., Suite 302
Silver Spring, MD 20910-4500
TTY 301.588.6545
Tel. 800.735.2258 (MD Relay Service)
Fax 301.588.8705
aadb@erols.com

18th Annual Closing The Gap Conference
October 17-21, 2000
Bloomington, Minnesota

Contact:
Closing The Gap, Inc.
P.O. Box 68
Henderson, MN 56044
Tel. 507.248.3294
Fax 507.248.3810
info@closingthegap.com
http://www.closingthegap.com/conf

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CDC National AIDS Hotline TTY Service

1-(800) 243-7889
same as
1-(800) AIDS-TTY

Can visit us at this website
http://www.ashastd.org
Look for the CDC National AIDS Hotline then look for TTY Service

Can E-Mail us.questions at
HIVNET@ashastd.org
Be sure to remember - Ask for the TTY Service to respond to your E-Mails

Can call us from anywhere in the United States, Puerto Rico, and the U.S. Virgin Islands.

We are open Monday - Friday from 10 AM to 10 PM. Specially trained operators answer questions about HIV and AIDS from Deaf people and other TTY users. Spanish operators are also available.

Are you... deaf-blind? a family member of a deaf-blind person? a professional serving deaf-blind people?

Do you have... ideas? hopes? *facts?* feelings? "bones to pick?" *thoughts?* gems you've always wanted to share with lots of people but didn't know how?

Do you want... to contribute "food for thought" to a field *hungry* for what you have to say?

Deaf-Blind Perspectives is looking for a few good writers!

You put it on paper – we'll take care of reviewing, editing, and possibly publishing it. Write, email, fax, or tape what you have to say – we'll take it from there (we might ask you to clarify or revise a bit). The language can be formal, fancy, formidable, funny, forceful, or frisky. The ideas don't need to be complex, compound, classy, or contorted – though we would like them to be chewy and clear.

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345 N. Monmouth Ave.
Monmouth, OR 97361
dbp@wou.edu
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